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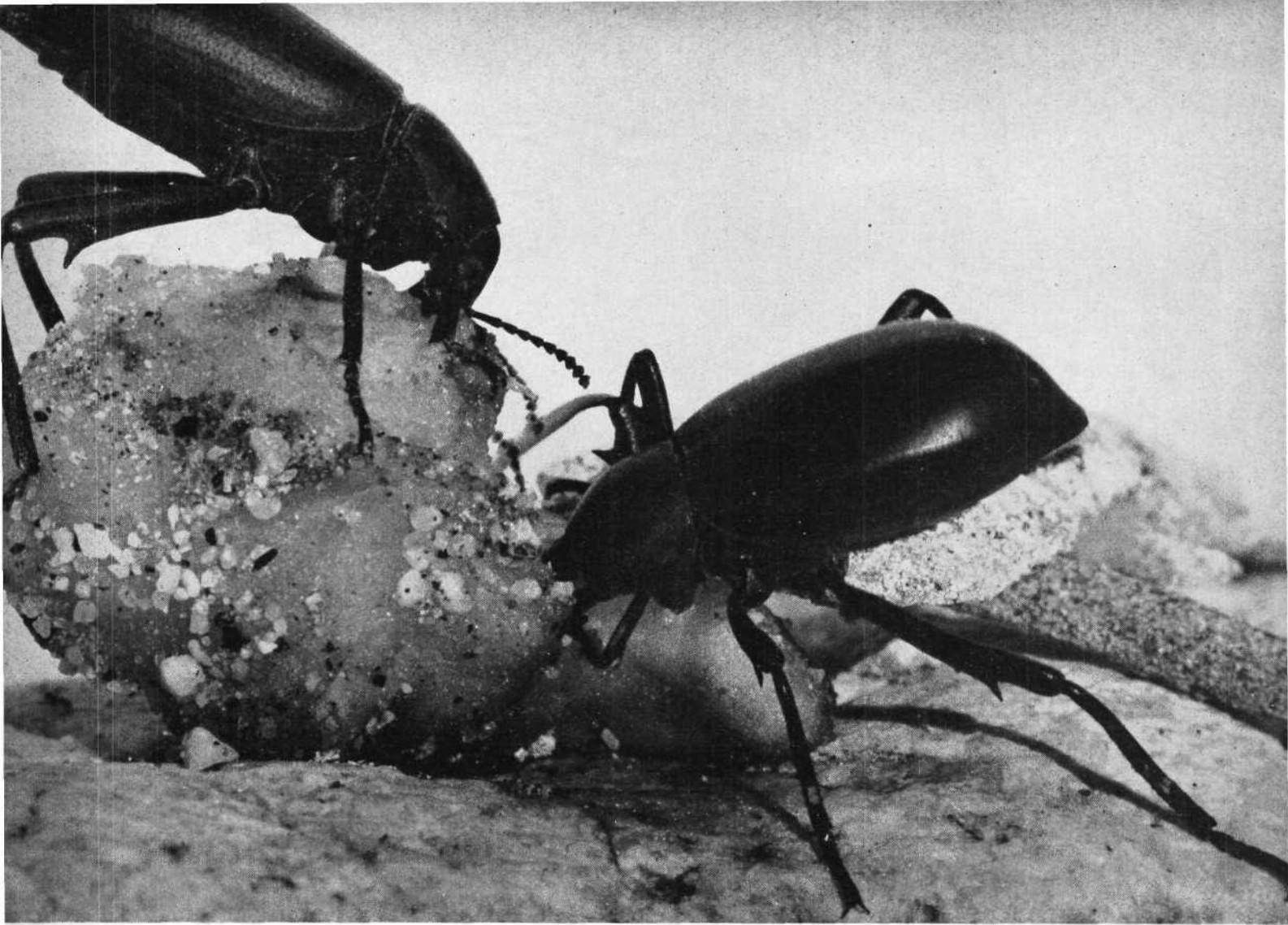
Desert

MAGAZINE



APRIL, 1943

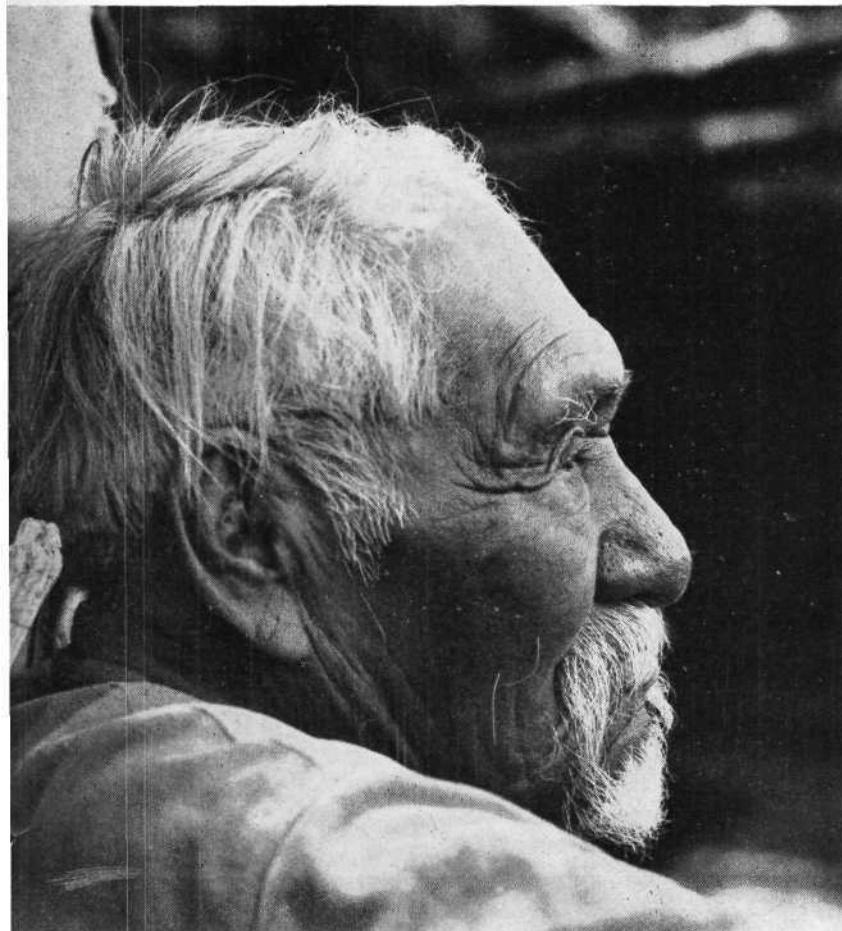
25 CENTS



Desert Beetles

By DICK FREEMAN
Los Angeles, California

First prize winner in Desert Magazine's February photographic contest shows two beetles, locally known as stink bugs, devouring an apple core at Split Mountain canyon, Borrego valley. Taken with a 3 $\frac{1}{4}$ x4 $\frac{1}{4}$ Speed Graphic on Panatomic X cut film. No filter, bright morning sunlight, 1/10 sec. at f32. Zeiss Tessar 3.5 lens, double extension bellows.



Indian George

By VIRGIL FORD
Trona, California

This portrait of Indian George of Death Valley won second prize in the monthly contest. (See Desert Magazine, February, 1940, for story of Indian George Hansen.) Taken with a 4x5 Speed Graphic Kodak F 4.5 lens. Ex. diffused light 1/50 at 8.8.

DESERT Close-Ups

• Typical of men the desert breeds is Dad Fairbanks, known to everyone who knows Death Valley and the Mojave. His experiences with early day Indians and prospectors and his pioneering days at Shoshone will be related by William Caruthers in Desert Magazine soon.

• Charles Kelly's hobby of hunting old inscriptions in the Southwest has led him into some fascinating and remote corners. In an early issue, he will tell Desert Magazine readers about some of the oldest and most interesting ones he has discovered in Wyoming, Idaho, Utah, Nevada, New Mexico and Arizona.

• Color of the desert is one of its most subtle, baffling qualities. But there is a scientific explanation of it—and the more we know about the luminous blue shadows, the rosy hazes, brilliant red and orange skies, the more we will appreciate the unique color harmonies of the Southwest. Jerry Lauder milk has made drawings especially to illustrate his forthcoming story on the subject.

• Margaret Stone, who has written this month's story about the Pahute Indians of Nevada, is one of the best known white women among the Southwest tribes. She has lived among them as friend and adviser. She has been with them in their triumphs and their tragedies; she has known them in their daily lives and their ceremonial rites. Later she will make Desert readers better acquainted with the Papago Indians of Arizona and the Laguna tribe of New Mexico.

• Last July, Desert published a story which aroused more comment than nearly any other in five years of publication—"Beauty is not in faces. But in the hearts of men." Phil K. Stephens, author-engineer, wrote this as the first of a trilogy. The second, depicting the Courage of the Desert, will appear shortly; and the third, Kindness of the Desert, is in preparation.

• Tom Terris, noted radio vagabond adventurer, will be introduced for the first time to Desert readers, when his prize story, "The Canyon of Death" is published this spring. Illustrations were drawn by the Navajo artist Charles Keetsie Shirley.

THIS MONTH'S COVER PHOTO . . .

One of the most dramatic and effective of desert Easter services has been held in Death Valley and has been nationally broadcast. The first sunrise service was held in 1929 by the late H. W. Eichbaum, builder and owner of Stove Pipe Wells hotel.

No other service was held until 1934, the year after Death Valley national monument was established. Until last year, they were conducted annually by a CCC chaplain with a choir of CCC boys and instrumental music. The park service was obliged to discontinue the services last year upon removal of the CCC. No service will be held this Easter.



Volume 6

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Number 6

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RANDALL HENDERSON, Editor.

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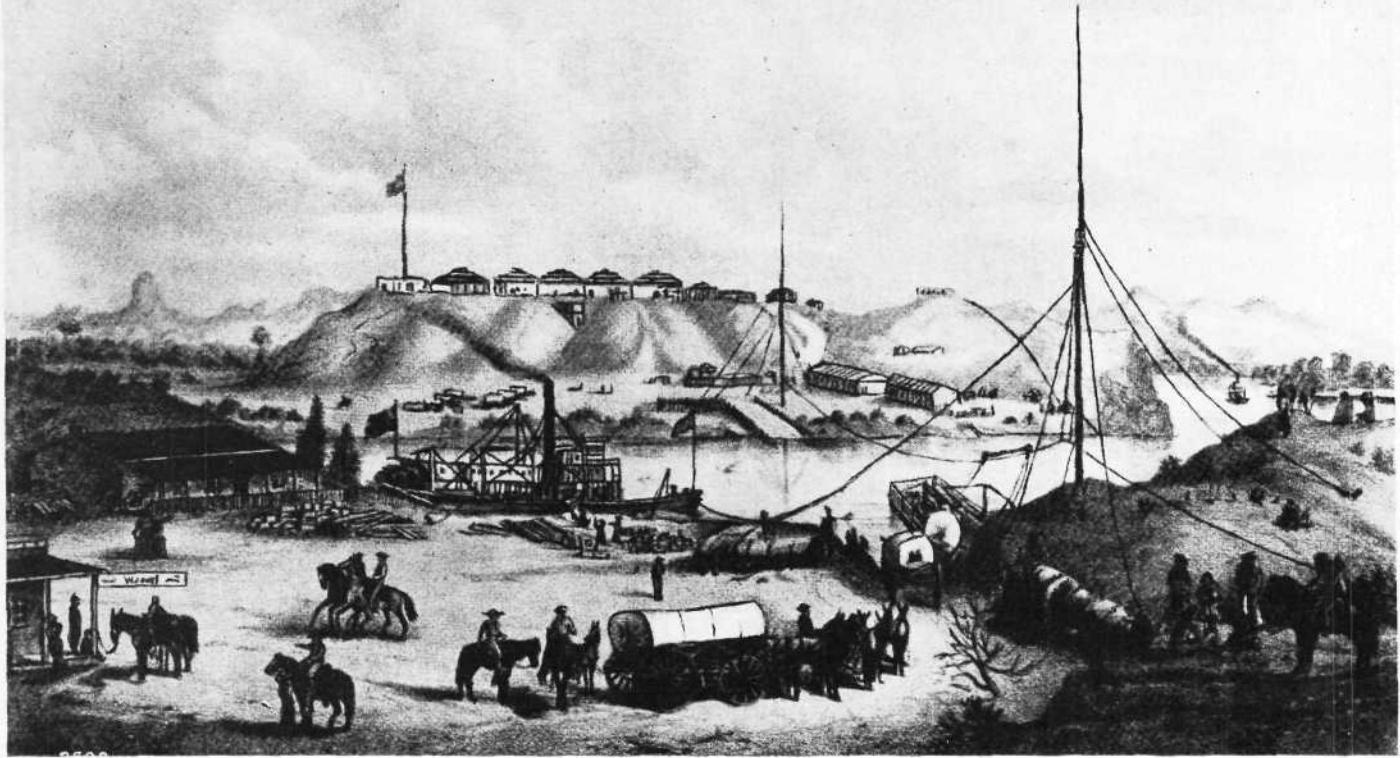
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Old Fort Yuma on the bluff above the Colorado river.

When Scalp Hunters Ran the Yuma Ferryboat

When John Glanton and his scalp-hunting renegades reined their horses at the Yuma crossing of the Colorado river in February, 1850, they envisioned a gold mine in the ferry being operated by Dr. A. L. Lincoln. Glanton promptly announced himself as a partner who would henceforth see that the ferry service was "managed properly." His exorbitant rates, often collected with gangster methods, and his ruthless elimination of competitors brought about a situation which compelled government action and the eventual establishment of Fort Yuma.

By ARTHUR WOODWARD

ON THE morning of April 23, 1850, three white men, members of the renegade band of John A. Glanton's band of Apache scalp hunters, burst from the willow thickets fringing the Colorado and raced for the protection of the rude ferry buildings some 300 yards away. Fear spurred their heels. As they emerged into the open a sleet of Yuma war arrows flickered around them like grey streaks of deadly rain. William Carr, one of the men, took an arrow in his left leg but

he dared not pause to remove it. His companions, Marcus L. Webster and Joseph A. Anderson, were firing erratically at the swarm of 40-odd Yuma warriors baying at their heels.

A few musket and pistol shots smacked flatly on the warm air, and white bolts of wooly black powder smoke blossomed unnaturally among the arrowweed and mesquite thickets. Before they reached the huts more Indians appeared and the panting men ran for the protection of the *jacales* in the Mexican camp not far from the ferry. The doors were tightly closed and the terrified inmates would not admit the refugees. The river was their last resort and the all but exhausted men fell into a small boat and pushed off into the stream.

Although they were unaware of it, they were at that moment the sole survivors of the Lincoln-Glanton ferry company which for about 14 months had been reaping a rich reward of inflated ferry fares from unfortunate gold hunters and home seeking emigrants crossing into California, via the southern route.

The ferry had started honorably enough as a legitimate business financed and operated by Dr. A. L. Lincoln, who is said to have been a distant relative of Abraham Lincoln. Dr. Lincoln had been in Mexico and late in 1849 started overland for California. He reached the Colorado the latter part of Decem-

ber and seeing the possibility of a ferry at the junction of the Gila and Colorado rivers, built a few mud and pole buildings on the California side just below the present site of Fort Yuma. Little did he dream that in a trifle more than a year his death and that of a gang of lawless renegades would be the direct cause for the establishment of a United States military post erected to guard the destinies of all future emigrants seeking admission to the Golden Land.

Dr. Lincoln began operation about January 1, 1850. He seems to have been a fair man, but too mild for a frontier ferryman. He employed three or four men to help him. They treated the Indians fairly and there was no trouble along the river.

On February 12, 1850, John A. Glanton, a blackleg lawyer from Tennessee and more lately from San Antonio, Texas, and still more lately from the state of Chihuahua, Mexico, and his lawless mob reined their jaded horses on the Arizona shore and waited for the ferry. There were nine men in Glanton's gang. Most of them were from Texas and Missouri. They were a ruthless, quick shooting, hard fighting lot. Their most recent income had been from the sale of human hair.

Originally they had hired out to the state of Chihuahua to collect Apache scalps on a sliding scale of prices ranging from \$25 for children through \$50 for women and \$100 for men. It was easy money for these border ruffians, some of whom had seen service in the Mexican war and had lived by their wits since the close of the conflict. Temptation urged them to sell to the Mexican officials any locks of black hair that might be found and when the purchasers discovered to their horror that certain of the Mexican population of Chihuahua were reported dead and scalped, the finger of suspicion pointed bloodily at Glanton and his crew. Without more ado the scalp hunters, in the parlance of the day, "sloped" for California where gold could be picked up from the ground or out of miner's pokes with a minimum of effort.

Glanton watched Dr. Lincoln operate for a week or so and saw that here was a golden opportunity if the ferry were properly managed. Glanton told Dr. Lincoln that he had a partner and thenceforth the ferry fares were collected by Glanton's men. The prices for crossing were exorbitant but since this was the only ferry in operation at that time, the unfortunate gold seekers were forced to pay or sit and starve on the Arizona shore. The majority paid and their grumblings were silenced by the sneers of the ferrymen and the tacit threats of lost baggage and revolvers prominently displayed in the waist bands of the renegade conductors. Thus Dr. Lincoln became a silent partner. No doubt he wished to be free of this obnoxious gang but there was no escape.

Money rolled in. It is said that the gang possessed some \$50,000 in silver and \$20,000 to \$30,000 in gold when the blow fell. It is known that prior to the sudden uprising of the Yuma Indians, Glanton and his men had deposited between \$6,000 and \$9,000 with Judge Benjamin Hayes of San Diego and had left a herd of 22 mules and horses in that town as well.

Trouble with the Indians began when a General Anderson from Tennessee who refused to pay the toll demanded for crossing on the Glanton-Lincoln ferry went down stream and built a boat. He crossed all of his stock and outfit and then turned the ferry over to the Yuma Indians under their leader Pascual with the stipulation that the Indians should not charge travelers more than \$1 per person, \$1 per animal and \$1 per pack. This ferry was six miles distant from Glanton's establishment. To better facilitate intercourse with the whites the Indians hired an Irishman, Callahan, to operate the ferry for them.

Naturally Glanton would not tolerate a competitor, more particularly when the competitor was an Indian. Accordingly, the Irishman was killed and robbed—and the murder was laid at the door of the Indians. The Indian ferry was mysteriously destroyed. Chief Caballo Sin Pelo went to Glanton and remonstrated. He offered to operate with the white men. The Indians would herd all animals safely across the river and Glanton

could collect for the wagons and the people. This offer infuriated Glanton. He made the mistake of whipping Caballo Sin Pelo with a stick and then kicking him out of the house.

That manhandling of Caballo Sin Pelo, head of the Yuma nation, was the death warrant of all the white ferrymen on the Colorado. The Indians bided their time. They knew a frontal attack would be fatal. Their only weapons were long arrows with fire hardened points, and the heavy potato masher shaped war clubs. Against the repeating revolvers and straight shooting rifles of the Americans those primitive weapons would be of little use. Indian-like they took their insults into their hearts where the verdigris of hate cankered and corroded.

They watched and waited.

The morning of April 23 the ferry force was divided. There had been 15 men all told at the ferry. One of these men had got into trouble at San Diego and had gone north to Los Angeles. On this day six men had crossed the stream in a boat to



"Three white men . . . burst from the willow thickets bringing the Colorado and raced for the protection of the rude ferry buildings . . ."

ferry some animals across. Five others including Dr. Lincoln and Glanton were around the ferry house, and the three men, Carr, Webster and Anderson had been sent to a willow thicket with a hatchet to cut some willow poles.

The six men in the boat were surrounded and taken alive without a shot being fired. En route to the California shore they were clubbed to death and thrown into the river. Dr. Lincoln was asleep, Glanton and his men were in a drunken stupor. Caballo Sin Pelo led the war party in person. He wanted the satisfaction of killing Glanton, which he did quite effectively with a rock. Lincoln and the other three men were clubbed to death. Only the three men in the willows escaped the massacre. So determined were the Indians to wipe out all vestiges of their persecutors that the three dogs belonging to the station were tied to the bodies of Lincoln and Glanton and burned alive with the bodies in the ferry houses.

After racing downstream for some 14 miles, the three white men put into shore. Their pursuers had melted away unable to keep up with the boat. The small craft landed on the Arizona bank just about opposite Algodones. When darkness fell the trio crossed to the California side. The fear ridden men crept into the woods and hid until moonrise. When they emerged they discovered the Indians had stolen their boat. The men fled south for another 14 miles. Here they encountered a party of about 20 Indians who apparently had been trailing them.

The Americans were in a tight spot. They had 11 cartridges between them for their three six shooters. With almost empty guns they bluffed the Indians away but as the latter retreated a Yuma man and a boy who spoke Spanish shouted at them in that language:

"You'd better run away if you can because we intend to kill all of you."

Cautiously the men made their way back up stream and reached the scene of the massacre at daylight on the morning of the twenty-fifth. From the Mexicans they learned the particulars of the tragedy and thence started across the desert toward San Diego.

On May 9, 1850, William Carr stood before Alcalde Abel Stearns in the sleepy little cow town of Los Angeles and set forth the particulars of the uprising but failed to tell all of the facts. On May 23, Jeremiah Hill, an emigrant who had crossed the river just after the affair, made another deposition and gave some insight into the true cause of the fracas. However, the wheels of white man's justice, however warped they might be in this instance, were already in motion.

Governor Peter Burnett of California had issued orders to the sheriffs of Los Angeles and San Diego counties to raise and equip posses of men to proceed to the Colorado and establish law and order. A volunteer militia outfit under the command of Major General J. H. Bean and General Joseph C. Morehead consisting of 100 men raised in two different detachments was organized and equipped with some difficulty. General Morehead was authorized to purchase animals for the expedition from the rancheros around Los Angeles and pay for the mounts with state scrip.

The native Californios understood gold and silver but paper promises were something else, hence Morehead and Bean had an unhappy time trying to persuade the rancheros to part with their stock. Eventually Morehead marched his command to the Colorado where he found the Indians quiet and going about their business. This did not suit the firebrands whom Morehead had collected, mostly emigrants from Arkansas and Missouri. A militiaman shot an Indian and when the Indian chiefs remonstrated with Morehead, the latter told the Yuma leaders that the white men came to treat or fight as the case might be.

Pascual the war chief retorted that he wouldn't treat but he was most willing to fight if the white man really wanted it. Shortly thereafter 150 Indians armed with bows and arrows attacked the volunteer's camp. Twenty Indians were slain. Morehead broke camp and fell back into the stockade that had

been built by the ferry company. This was virtually the end of the so-called "Morehead War." All told the Gila expedition cost the state of California a total of \$76,588.26.

After Morehead's fiasco, Major Samuel P. Heintzleman, stationed at San Diego with a regular army unit, marched across the desert with three companies of infantry to found a permanent post at the junction of the Gila and Colorado rivers. Heintzleman had received his orders in July, 1850, but it was not until November 27, 1850, that he and his force of United States regulars established their "Post at the Mouth of the Gila."

The first site of the camp was about six miles below the present Fort Yuma Indian school, which occupies the area covered by the well laid out fort of a later date.

When Heintzleman moved his camp onto the rocky ridge he settled on the ground that had been Camp Calhoun laid out by Lt. Cave J. Couts, leader of the military escort for the Whipple Boundary Survey, October 2, 1849.

This first rude camp was called Camp Independence. It was enclosed by a stockade and was in the lowlands. In March, 1851, the command moved to higher ground and occupied the very spot where once stood the ill-fated Mission de la Concepcion, where died Padre Francisco Garces on July 19, 1781. Crumbling adobe and charcoal debris of that tragedy were shoveled away by the soldiers under Major Heintzleman and Lt. Thomas W. Sweeney as they laid out the future Fort Yuma. The commandant's headquarters rose on part of the old stone foundations of the destroyed mission.

However, the jinx that hovered over that rocky hill laid its hand upon the American soldiers. Provisions dwindled and the supply trains expected by Heintzleman did not arrive. Accordingly in June, 1851, Heintzleman and his command fell back toward San Diego, leaving Lt. Sweeney, the fighting Irishman who had lost one arm in the Mexican war, with a detail of 10 men to hold the post.

No sooner had the main body of troops left the river than the Indians under Caballo Sin Pelo began to act ugly again. Sweeney threatened to give them a dose of canister from his 12-pound field piece and so dispersed them. However, provisions sank lower and lower and at last Sweeney, with a few reinforcements, was forced to retire from the river. He arrived at Santa Ysabel in the mountains of San Diego county just in time to participate in the windup of the Garra uprising which had the entire southland in a turmoil. Prior to leaving the camp on the hill Sweeney had dug a cache and hidden all surplus government property, which the Indians dug up and appropriated as soon as the soldiers were out of sight.

The main difficulty in maintaining the post on the Colorado was the inability of wagon trains to supply food to the troops. A depot of supplies was ordered established at Vallecito and arrangements were made to send ammunition, clothing and food via steamer to the mouth of the Colorado, and thence by river boats upstream to Yuma.

On February 29, 1852, Heintzleman and Sweeney once more reached the Colorado and reoccupied the fort on the hill. Henceforth it was to be a permanent post. The Indians had made a thorough job of burning the willow-pole and mud quarters and the troopers were more than disgruntled to think that they would have to begin all over again.

In March Heintzleman decided to end all Indian hostilities in the vicinity of Fort Yuma. Three detachments consisting of men from the Second Infantry and the First Dragoons scoured the country between the two rivers and to the north of the post. The non-arrival of the "Sierra Nevada," the first U. S. military steamer to essay a trip up the Colorado with badly needed supplies caused Heintzleman to send Major Fitzgerald with 24 men of Company E, First Dragoons, downstream to learn the cause of the delay. Twenty-two miles below Yuma the soldiers were ambushed and seven men were killed. The troops pushed on to the mouth of the river under great difficulties, sometimes

wading in water up to their thighs for miles at a stretch. A current news account of the day stated "All officers of the army engaged in their suppression unite in the opinion that the Yumas are 'some' and that a harassing border Indian war will for a long time continue to furnish them with ample professional employment." On October 11, 1852, Major Heintzleman issued an order announcing the termination of hostilities with the river tribesmen. "The recent expedition has resulted in their entire subjection to the United States authority. To continue this good understanding the Indians must be treated with justice and kindness."

Although Indian troubles virtually ceased the garrison at Fort Yuma had other matters to engage their attention. Incoming travelers swarmed into the post garden, as a result of which the ferry company was forced to move downstream to a point within a half mile of old Camp Independence.

This was good for the vegetables but the officers and men missed the excitement of the ferry where hundreds of men, women and children as well as thousands of animals crossed each month.

On the 26th of October shortly after the end of the Indian war misfortune again fingered the miserable collection of huts comprising the fort. The bang of the musket of sentry on Post

Number 3 and the dread shout of "Fire," brought everyone out of quarters. D company's kitchen was aflame. In a short time D company's quarters went up in a blaze. The huts occupied by H company along with the kitchen were next to go. The guard house burst into flame and as the men were fighting the blaze in I company's quarters the cry was raised that the commissary store house was on fire.

The last information brought terror to every face. In that building were all the commissary stores and what was worse there were two barrels of cannon powder and about 40 boxes of ammunition. Major Heintzleman and Lt. Sweeney rushed for the flaming building calling on a detail of soldiers to follow them. Only a few of the old soldiers responded, but even they paused at the door. It was a dramatic moment. The two officers were the only men inside the building. The roof dripped fire. Large flakes of burning material were falling down upon the boxes and barrels. Frantically the officers brushed the sparks aside.

"For God's sake go get some men," shouted Heintzleman.

Sweeney dashed out and rounded up some soldiers who were on the opposite side of the hill and marched them back into the burning building. The two officers remained in the hut until the last of the powder and ammunition was carried out. None of the



"'For God's sake go get some men,' shouted Heintzleman."

provisions was saved. Everything that had arrived in a wagon train from San Diego the day before went up in smoke.

As if the fire were not enough the post was rocked by a severe earthquake on November 29 and on December 1 the ground was still shaking so badly as to interfere with letter writing. The tremor so frightened the garrison that sentries ran from their posts and huddled on the parade ground. Gigantic cracks opened in the ground, the river behaved in a mad fashion and far to the south a large column of smoke and steam arose. Large fragments slid down from Chimney Rock and the express rider en route to the post from San Diego reported that his mule had trouble keeping on its feet.

Great was the rejoicing in camp on December 3 when the steamer "Uncle Sam," the first steamer to navigate the river to Fort Yuma arrived with about 20 tons of commissary stores from the schooner "Capacity" then lying downstream some 120 miles. The "Uncle Sam" was only 65 feet long and some 10 or 12 feet wide. This ship sank in June, 1853, at Ankrim's Ferry while being cleaned for the installation of a new engine.

After the fire a more substantial Fort Yuma rose from the ashes. Adobe buildings were begun but work proceeded slowly. Orders for new barracks were issued but countermanded and it wasn't until late in 1854 that 35 wagons drawn by 90 mules with a force of 35 carpenters and masons set out from San Diego to build the post under the supervision of D. B. Kurtz. By June, 1855, work was well under way continuing at a brisk rate well into the year despite the heat, the weather being rated as cool in October of that year with the thermometer not over 100 in the shade.

The heat at Fort Yuma was proverbial. The three most widespread stories concerning it were that a dog once ran across the parade ground on three legs, yelping at every jump, the

ground being so hot that it burned his feet. The hens at Yuma laid hard boiled eggs. (Eggs did fry up in the heat which gave rise to this yarn.) Then there was the tale of the old soldier who died at Fort Yuma and went to hell. He returned to the post the next night to get his blankets! However Dr. Elliott Coues who spent some time at Ft. Yuma in 1856 maintained he had been hotter in Washington, D. C., Quebec, Canada, and New York City than he had been at Yuma. On the afternoon of June 16, 1859 the thermometer registered 119 degrees, the hottest in nine years.

At the outbreak of the Civil war soldiers of the 6th and 4th Infantry were stationed at Yuma. By this time the post was fairly substantial. Water was no longer hauled in a cart from the river. The buildings were of adobe plastered inside and out. There were about 23 structures surrounding the flat barren parade ground "where not one single blade of grass, or vine or tree worthy of the name is seen . . ." Redoubts, semi-circular outposts composed of earthen embankments lined with willow fascines, where barbette guns were mounted were constructed in October and November of 1861. These were finished by Company I, 1st California Volunteers, and the lunette to the east which guarded the ferry was called "Ft. Butte."

Like all frontier posts, once the menace of Indian ambush was lifted from the trails the soldiers guarded, the forts ceased to have a legitimate reason for their military existence. Fort Yuma was no exception. On July 17, 1884, the acting secretary of war advised President Chester A. Arthur that Fort Yuma no longer was necessary as a military reservation. Accordingly on July 22, 1884, the President transferred Fort Yuma to the department of the interior and General Order No. 80 issued on July 28 officially informed the army that the post ceased to exist. On March 5, 1892, Fort Yuma became a part of the Yuma Indian reservation.

WATER AND POWER . . . both the people's

- Water is everything to Imperial Valley. It makes the difference between a barren desert waste and a fertile, green, agricultural empire.
- But water flowing into the valley through the confines of the great All-American canal is doing more than making possible the production of millions of dollars worth of vital farm products. It is turning turbines at two huge hydroelectric plants on the All-American canal and creating a by-product — Electricity — to light homes and farms and turn the wheels of industry in Imperial Valley.
- Both water and power belong to the people. Diversion of water, generation of power, and distribution of both are handled by the Imperial Irrigation District, a cooperative utility—owned and operated by the people of Imperial Valley. Revenue from the sale of this power will pay for the All-American canal which in turn has assured for the people a safe and certain water supply.
- Thus do the thrifty people of this unique and vastly productive valley make full use of their God-given resources and insure the future of this miracle land which is helping to feed the nation.



Meet Bill Chalfant dean of newspapermen, first citizen of Inyo. For half a century he has recorded the life of his desert community in the pages of "The Inyo Register" at Bishop, California. His career started before he was six, when he composed and printed his first card. At eight, he ventured into his first publication, "The Juvenile Weekly." Since those days he has become known as the First Country Editor of the desert country. Here is a part of his story. Much more of it is recorded in the 50-year file of his newspaper and in the books he has written about the land which proudly claims him.

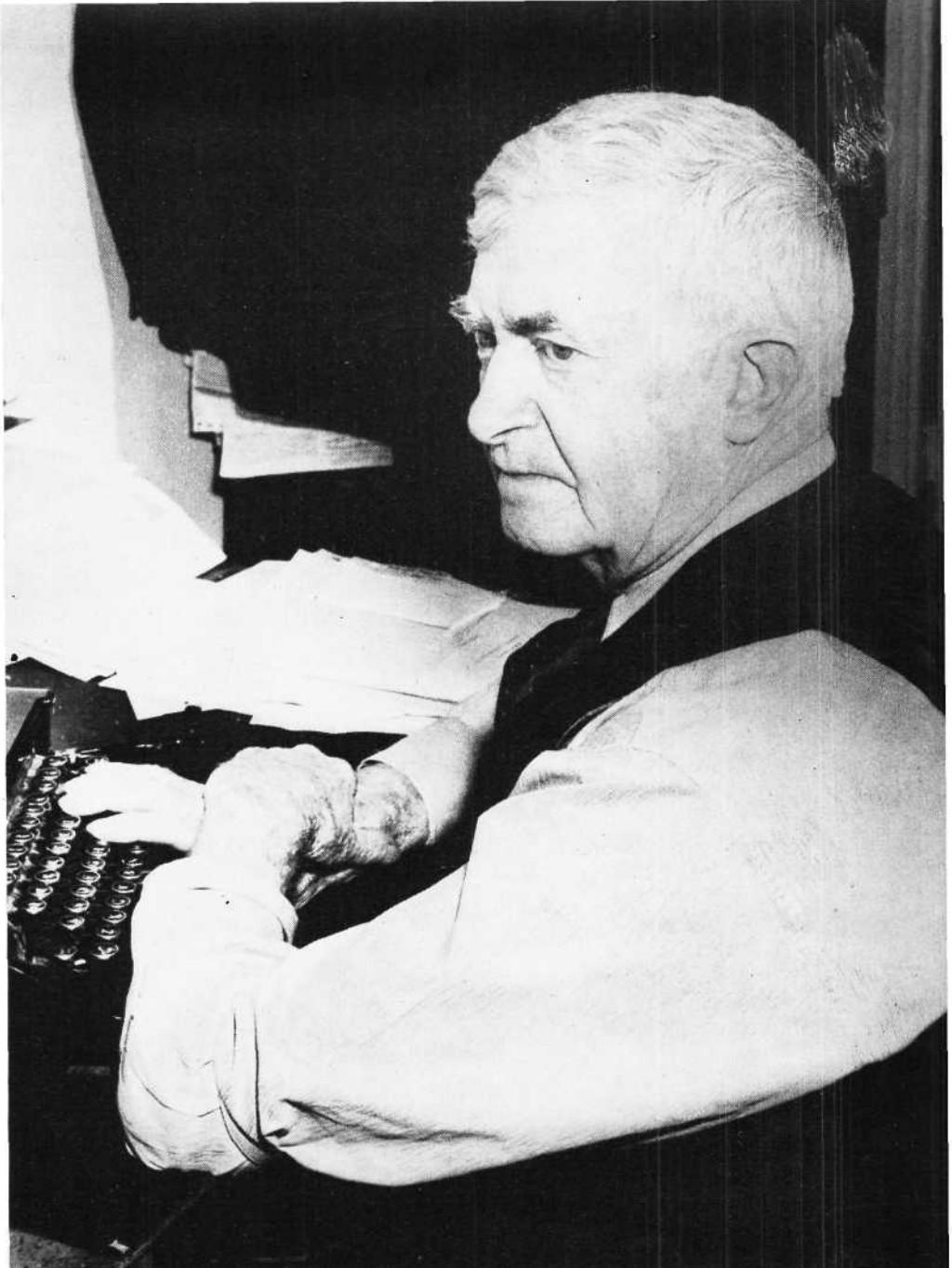
Meet-- Chalfant of Inyo

By MORA M. BROWN

IN THE northwest corner of Inyo county in east central California is the town of Bishop. East of it stretch the bare peaks of the White mountains. Against its western sky is spread the saw-toothed grandeur of the High Sierras. Nearby flows the Owens river.

Highway 395 is one with the main street, and, as you travel north, a little past the center of the town, you will see a small building labeled "The Inyo Register." In the big window you will notice a haphazard collection of mineral specimens, and inside, against the north wall, a desk, in the clutter of which the paper's editor maintains that he can lay his hand on anything he wants. If you are lucky you may even discover that white-haired gentleman with blue eyes which strive to hide their twinkle. He is W. A. Chalfant, country editor, dean of newspapermen, and first citizen of Inyo. I want you to meet him.

If you are a newspaperman, you know him. If you are not, you doubtless know his record. The California papers told the story back in 1939. One evening of that year the Bishop Rotarians motored down to Lone Pine for dinner with the Lone Pine Lions. The occasion was a golden anniversary. The speaker was the widely loved "Padre of the Desert," Father John



W. A. Chalfant still works at his desk, where he has edited the story of Inyo for half a century.

J. Crowley. The man whose record he recounted was his close friend. The gift presented was a desk set of Death Valley onyx and gold on which was inscribed:

"To W. A. Chalfant, after fifty years of living, writing, and publishing Inyo's story.

Bishop Rotarians
Lone Pine Lions."

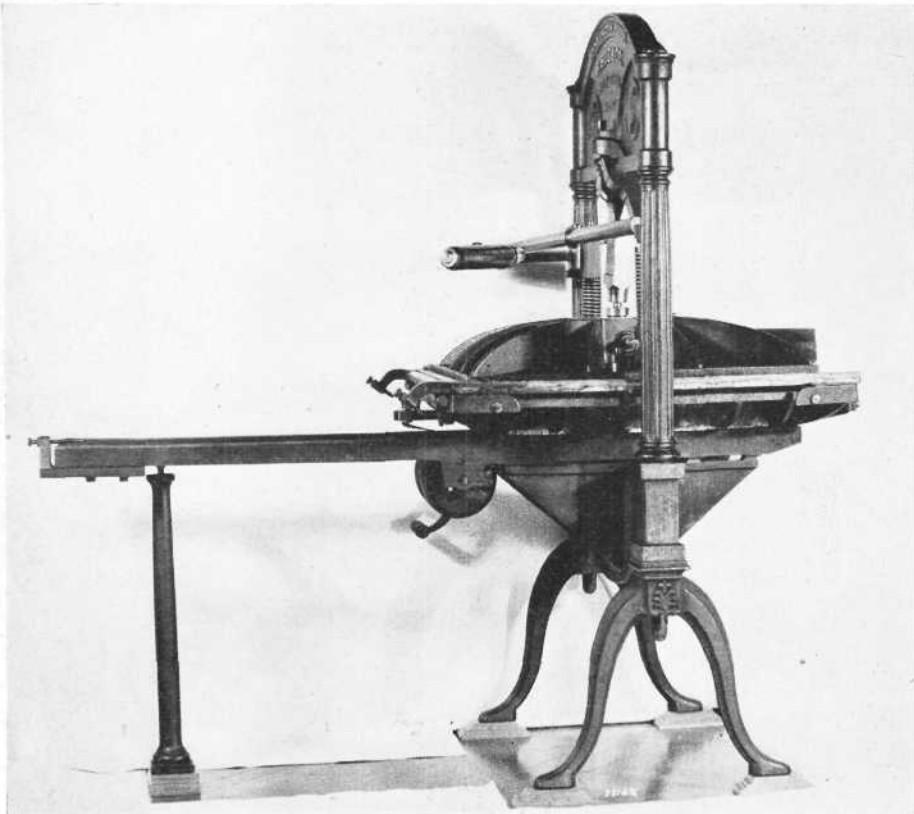
Shortly after, and by special invitation, Chalfant was initiated at the University of Southern California into Sigma Delta Chi, national journalistic fraternity. This was in recognition of his more than 50 years at the same editorial desk. This was part of the story in the newspapers which recognized him officially as dean of newspapermen in California.

Now, Time has called the desert priest from his desert circuit to the Unseen Heights; War has called the young fraternity brothers to every section of the

earth; but, at his friendly desk, Chalfant still lives, writes, and publishes Inyo's story.

Bill Chalfant's tale does not begin with Inyo. It does not even begin with Chalfant's birth. It begins, rather, on a September day in Utah in 1849 when the personnel of several wagon trains gathered west of Salt Lake City to confer about the route. More than 100 wagons were there, and there were three main groups. Jefferson Hunt met with them as their guide. Without frills he told them of the gaunt and dangerous days ahead. He could promise safety only if they followed him southward into California by way of Cajon pass.

But one group, young adventurers from Illinois who called themselves the Jayhawkers, had heard of a more northern route through the Sierras via Walker's pass. One group, "The San Francisco



The old Washington press, now in the Edison museum at Dearborn, Michigan. This was the first press in Owens Valley, the third in California—and with it the Chalfant Press began.

Party" preferred to go straight west. As a result the party split three ways. The first followed Jefferson safely into Southern California. The second encountered tragedy in Death Valley. The third, "The San Francisco Party," traveled slightly southwest across Nevada and entered California northwest of Reno over Beckwourth pass. In that group was a young man named Pleasant Arthur Chalfant. The story began with him.

He came primarily for gold, and did his first digging at Bidwell Bar near Oroville. Somewhat later on Indian Creek in Idaho he ran a sawmill among hostile Indians. In Idaho, too, he found his wife, and came with her to live in Virginia City, Nevada, where Mark Twain was reporter on the "Territorial Enterprise." And here in 1868 was born the first of eight children, a son whom they named Willie Arthur Chalfant.

Two years later the little family moved to Independence in Owens Valley, California, and there in 1872, with his half brother J. E. Parker, Pleasant Arthur Chalfant began publication of the "Inyo Independent."

They bought their press from the Esmeralda Union in Aurora, Nevada. It was the first press in Owens Valley, and the third in California. And before it reached Independence it had made a record of its own. It was a Washington press made by R. Hoe and Co. of New York, and some-

time before 1848 it was sent to Baton Rouge, Louisiana. There Judge J. Judson Ames used it to print "The Dime Catcher," a Whig paper supporting Zachary Taylor for President. In 1849, stricken with gold-itch, Ames headed with his press for California by way of the Isthmus of Panama. Ames made it across the isthmus all right, but his press was accidentally dumped into the Chagras river. Fished out and cleaned, it paused in Panama to print for Ames "The Panama Herald."

But gold was calling, so the two sailed for San Francisco where they got out the issues of the "Placer Times and Conscription." Next the inseparable pair went to San Diego and printed the early writings of humorist John Phoenix in the "San Diego Herald." The little machine's next home was the Mormon outpost San Bernardino where Ames put out "The San Bernardino Herald." Ames died here, and Major E. A. Sherman took over the press to publish "The Patriot" which—being a Union paper in a Confederacy-minded community—failed. So, overland to Aurora, Nevada, went Sherman and press to join with a man named Frearer in publishing the Esmeralda "Star." In 1864 the ownership changed hands and the "Esmeralda Union" came to life. The old press did its last work on "The Inyo Independent."

On it young Willie Chalfant began to

learn his trade. The pressroom occupied the upper story of the Chalfant house which, though severely shaken, survived the great earthquake of 1872. Before Willie Chalfant saw a First Reader he had learned to read type. Before he was six he had composed and printed his first card. At eight, on a small press which his father gave him, he ventured into his first publication.

"It was a sheet six inches square," Mr. Chalfant told me, "and I called it 'The Juvenile Weekly.' But," he added with the twinkle showing, "it didn't last long."

In those days getting out a newspaper was not the lightning clatter of machinery that it is today. It was a matter of setting and inking type by hand, of printing papers one at a time on one side of the sheet, then resetting type and repeating the process on the other side. Folding, too, was done by hand. So there was plenty of work for an interested son.

Hence, it was no cub who at 13 began to print his own weekly, "The Owens Valley Newsletter," which lived for several months. In 1881 Pleasant Arthur Chalfant sold his share of the "Independent" and moved to Bishop. Bill Chalfant remained in Independence as compositor on the paper. When shortly the owner failed, he lost the \$180 due him in wages, and went to Bishop, too.

Inyo county was still young. It was but two years older than the younger Chalfant, and it was feeling its oats in mining discoveries, the most important of which was the Cerro Gordo in the mountains southeast of Lone Pine. These discoveries brought in gold seekers, but with them came men in search of homes. To them, farming, not mining, spelled the future of Owens Valley. So they took up homesteads, fought the native Pahutes, and prepared their land for farming. "All that is needed," said one paper of the day, "is capital and population to make this the richest valley in California, if not in the world."

That was optimistic, but it was not fantastic. Owens Valley stretched long and wide and gently sloping in the shelter of great mountains, and all down its length was the water fed by High Sierra snows. Game abounded in the heights. Fish were plentiful. Wealth lay just beneath the covers of the hills. The water needed only a minimum of harnessing to conserve the flow and make this a farming paradise. But even then, Pleasant Chalfant was fighting individual efforts to monopolize the area.

In 1885 the Chalfants again went into newspaper work, initiating "The Inyo Register." Willie Chalfant was full partner. The younger members of the family were typesetters and helpers. Then in 1886 the father was elected assessor of Inyo county, and the editorship of the paper fell to the son. Three years later he began

his long career when he became sole owner and editor.

It has been said of Pleasant Arthur Chalfant that his heart was so full it kept his pocket empty. He spent much of his salary for the taxes of unfortunate friends. It is said, also, that he was honest, independent and fearless. Inyo citizens use these words in speaking of the son. Add to that heritage a wide sweep of valley, granite mountains holding lakes and forests in their pockets, and a pioneering spirit, and you have the Chalfant background. It makes you think about the story of The Great Stone Face.

"Chalfant leaned over backward to be honest with himself," is the way his brother-in-law put it. "Nobody with shady schemes got their advertising in his paper, no matter what they tried to pay. He never budged from that rule."

But he was not stern. As a young man he joined in all the activities of the young people. He played the cornet, led the town band, and especially liked to dance. After his marriage in 1892 to Miss Flora Mallory—a school teacher from Nevada—he became an active force in community life as club man, lodge man, and business man.

Late in the nineties, neither the Chalfants nor anyone else thought much about it when a young woman, whose husband had failed to support her, came with her

abnormal child to teach English at Inyo academy. She taught the younger Chalfant children and wrote stories for "The Youth's Companion." Then she wrote a book called "The Land of Little Rain." After that the world knew Mary Austin.

By this time Owens Valley had progressed considerably. There were no longer Indian wars. Mining was satisfactory. Farming was coming to the front, and all eyes were turned upon a farming future. Before ever there was a reclamation act, enterprising homesteaders had located eight reservoir sites and had sought government permission to build dams for storage and irrigation. Hence, it was no surprise to them to learn that government engineers, sent out to study western lands for irrigation, placed Owens Valley near the top because of the ease and comparatively small cost with which it could be irrigated. Willingly they relinquished the rights to their dam sites to the government, confident that if anything interfered with the completion of the project their rights would be restored to them.

But already an individual, who had coveted the water of Owens river since 1892, was making plans to use that water to irrigate private land of which he was part owner. No one in Owens Valley knew this, nor did they suspect that an important government engineer, interest-

ed also in this private land, was soon to play his part in this plan. In 1904 the engineer reported to Washington that the city of Los Angeles desired to divert Owens Valley water to itself.

True, the city did want the diversion, but by constructing storage dams to prevent waste, there was enough water for both Owens Valley farmers and Los Angeles. However, north of the city lay the rich but very dry plain of San Fernando valley. Here was the privately owned land for which the water was wanted. The full story of how that objective was achieved is told in Chalfant's revised "The Story of Inyo." In this book, with all its evidence carefully documented, you realize that even in recording the betrayal of his people, Chalfant has bent over backward to be honest.

Throughout this period Chalfant fought for Inyo, both by his editorials and by active participation. He fought bitterly and fearlessly for Inyo; yet, he fought his own people as fearlessly when they would have resorted to destruction.

Besides the story of Inyo he has written three other books. "Death Valley: The Facts" is an authority on its subject. "Outposts of Civilization" is a historical record of people and events beyond the bounds of Inyo county. His latest book "Tales of the Pioneers" is just off the press. It is

Mr. and Mrs. Chalfant on their golden wedding anniversary in September, 1942.



what its title proclaims—little-known factual stories of early Nevada and California days.

Writing is of necessity a lonely business, but Chalfant is gregarious. So, he joined the Knights of Pythias, of which he is still a member. He became a Mason, and for more than 40 years he has been secretary of Winneduma Lodge F. & A. M. In 1929 he became a charter member of the Bishop Rotary club, and from then to now he has not missed a meeting. So proud are his fellow Rotarians of this record that once when he was ill they held their meeting at his bedside. Thus was the record kept intact. In addition he is chairman of the advisory board of the Bank of America in Bishop, and, although he has never owned a car himself, he is on the advisory board of the Automobile Club of Southern California.

In January, 1942, he sold "The Inyo Register" to George W. Savage and Roy L. French, publishers of the "Lone Pine Progress-Citizen" and "The Inyo Independent." To honor the name of Chalfant they designated the combined enterprises "The Chalfant Press." They retained W. A. Chalfant as editor of "The Inyo Register" with complete freedom of opinion. It is an interesting fact that in a recent primary election "The Inyo Register" supported a candidate opposed by the other two papers of the Chalfant Press.

Last September the Bishop Rotarians had another of several special dinners given in Chalfant's honor. This time, however, the two Chalfants were summoned to a "Ladies' Night," only to discover that while all the Rotary Annas were present, they were there to celebrate another golden anniversary—this time of their wedding. At this meeting the speaker was John B. Long, manager of the California Newspaper Publishers' Association, and he said in closing:

"Angel's Camp had its Mark Twain, the Valley of the Moon its Jack London, San Francisco its Bret Harte, and Owens Valley has its Bill Chalfant."

He does belong to Owens Valley—to all of Inyo. He is its pride. And it belongs to him—it is his only child—and he has given his lifetime to living, writing, and publishing its story.

And his work goes on. Savage and French have been called from the valley

by the war. Heavy responsibility again has been laid across the Chalfant shoulders. But, veins still flowing full of printer's ink, he continues as he has for the past half century.

"It's what I'll always be doing," he said simply, "and always for Inyo."

TRUE OR FALSE

Even if your rating isn't high in this month's quiz, you will add to your fund of desert lore in the fields of history, geography, botany, mineralogy. Those who can answer half of the questions correctly are officially "Desert Rats." Those who exceed 15 belong to that select fraternity known as the "Sand Dune Sages." The answers are on page 35.

- 1—California was still Mexican territory when the Jayhawkers crossed Death Valley. True..... False.....
- 2—Most species of agave, or wild century plant, of the Southwest die after one flowering season. True..... False.....
- 3—Chrysocolla is generally found in iron ores. True..... False.....
- 4—Carlsbad caverns were once included in a national monument. True..... False.....
- 5—The Colorado river once flowed through New Mexico territory. True..... False.....
- 6—The desert sidewinder moves with its head and tail parallel while the middle part of the body describes a series of loops. True..... False.....
- 7—To go to the Blue Forest you would take Highway 66 northwest from Flagstaff, Arizona. True..... False.....
- 8—The tortoise is the most intelligent of reptiles. True..... False.....
- 9—Wild Horse Mesa was named by Zane Grey. True..... False.....
- 10—Chin Lee was a Chinaman well known in early mining camps of Arizona. True..... False.....
- 11—Cliff Palace is the best preserved of the Canyon de Chelly Indian ruins. True..... False.....
- 12—Bloodstone is also known as Heliotrope. True..... False.....
- 13—Perpetual Ice Cave in New Mexico is one of the best examples of limestone caves in the Southwest. True..... False.....
- 14—Francisco Garces discovered the Mojave river. True..... False.....
- 15—The Desert Lily is the only true lily found in the Southwest desert. True..... False.....
- 16—Dick Wick Hall, the noted humorist, lived at Salome, Arizona. True..... False.....
- 17—The "Lost City," Pueblo Grande de Nevada, may now be visited by the public. True..... False.....
- 18—Colossal Cave, in southern Arizona, was discovered by archaeologists while exploring for Indian ruins. True..... False.....
- 19—One of the uses for rattlesnake antivenin is in the treatment of haemophilia. True..... False.....
- 20—Bradshaw stage road is another name for Butterfield stage road. True..... False.....

Amateur Photo Contest . . .

Each month the Desert Magazine offers cash awards of \$5.00 and \$3.00 for first and second place winners in an amateur photographic contest. The staff also reserves the right to buy any non-winning pictures.

Pictures submitted in the contest are limited to desert subjects,

but there is no restriction as to the residence of the photographer. Subjects may include Indian pictures, plant and animal life of the desert, rock formations—in fact everything that belongs essentially to the desert country.

Following are the rules governing the photographic contest:

- 1—Pictures submitted in the April contest must be received at the Desert Magazine office by April 20.
- 2—Not more than four prints may be submitted by one person in one month.
- 3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, 3 $\frac{1}{4}$ x5 $\frac{1}{2}$ or larger, and must be on glossy paper.

Pictures will be returned only when stamped envelopes or photo-mailers are enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the April contest will be announced and the pictures published in the June number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.



Deb Roop, in foreground, digging around a black opalized log at his Monarch opal claim in the Virgin Valley. Photo by Sterrett, U. S. geological survey.

Precious Opal of the Virgin Valley

By LELANDE QUICK

"I'M GETTING tired of going after wood and jasper. I'd like to pick up some REAL stuff—like opals for instance, but of course, that's impossible." A friend of mine said this to me back in the days when field trips were made regularly for rocks and gem materials.

"You'll be glad to know you're wrong," I replied, "for probably the finest opals in the world, certainly the ones which have commanded the highest prices, have been found in our western deserts. Within 24 hours we probably could be gathering opals that would make your head swim."

"Now see here," said my friend, "I'm serious. If there were opals within a thousand miles I would have known of it and

you would have some of them to show me."

"You're right on both counts," I said, "for you've heard of the Virgin valley, I know, and I do have some of the opals to show you but I'm ashamed of them for they are the usual worthless stuff that people get when they go up there."

There is magic in the word "opal" for any gem collector or cutter and, although nearly every one of them has heard of the Virgin valley opals few realize that opals have been found there that were worth several king's ransoms—a king's ransom being at least a hundred thousand dollars.

The finest opal ever found in the Virgin valley (probably the finest opal ever found anywhere) was picked up by Flora Loug-

When travel is again in order, many gem collectors will take the trail to northern Nevada—and the Virgin Valley. The lure is precious opal, which occurs as silicified tree casts in the soft sedimentary volcanic ash and petrified tree trunks which are still standing. Although common opal abounds in the area, fire-shot precious opal is not plentiful, but in the opinion of many who know the valley well, the finest specimens are yet to be found.

head, who pronounced her name the way her famous inventor sons Allan and Malcolm spell it phonetically—Lockheed. She found this opal in 1919. It weighed 2,665 carats which is a little more than 19 ounces. It was valued at a quarter million dollars and was acquired by the late Colonel Roebling of Trenton, New Jersey, whose father built the Brooklyn bridge. Colonel Roebling donated the opal to the United States national museum at Washington, D. C., where it is now on permanent display. It was never cut but was preserved in the rough so that none of its magnificence would perish. It is a large pitch-black mass with wide flashes of vivid red and green fire and it was origin-

ally part of the bark of a tree which changed to opal.

Mrs. Loughead died at the home of her daughter, Hope Loughead Ledford, at Berkeley on January 29 of this year at the age of 87. Even when she had passed the 80 mark she regularly made trips to her several opal claims to supervise the annual assessment work required to keep the claims active. She was also the mother of Victor Loughead, scientist and technical writer and she was a writer of note herself, being the author of several published novels and a staff writer on the San Francisco Chronicle for more than 30 years. It was while she was writing for the Chronicle that she visited the Virgin valley to investigate the new opal fields for a story and became interested in digging opals herself.

Virgin valley is located in Humboldt county, Nevada, in the northwest corner of the state where the states of California, Nevada and Oregon meet. Few sections of the United States are as little known, for no railroads cross the valley and no good highways exist. The graveled roads are satisfactory only during the summer months. The occasional visitor must take all supplies such as gasoline, food and water for the nearest store is at Denio, Oregon, about 30 miles away.

I remember that when my good friends the Fred Ruggs first visited the valley they wanted to see Denio and they wanted to say they had been to Oregon, so off they started on the 30-mile trek picking up a stranded motorist who wanted to get to town for a wheel. They were all dismayed when they saw the "town"—population 30. The nearest town in California is Cedarville. That is a "big" place (population about 600) and it is 91 miles west of the valley. As the government agents in the valley are not allowed to dispense gasoline it is important that the visitor obey the Boy Scout motto and "Be Prepared."

The valley is an inhospitable land with no trees, sparse vegetation and almost no water. The 130 degree summer heat and the winter winds and snow are anything but conducive to comfort. But who would not bear any discomfort for the reward of personally picking up even a bad opal? Ah, but there is no such thing as a "bad" opal. Most are not of gem quality but no opal is unattractive if it has even a tiny bit of "fire." Some are less appealing than others but I have never seen one so dull! but that I felt powerless to describe the beauty that was there. I refer to fire opal, as common opal is interesting but seldom beautiful. A good opal is so magnificent that it is futile to attempt an adequate description and I have never read one.

The Virgin valley fields are like the black opal fields of Australia in topography and forbidding climate. The best opals are found in ridges lower than the surrounding country at both places—at



A white opalized pine cone in a lump of translucent precious opal from Deb Roop's Monarch claim. Sterrett photo.

Rainbow ridge in the Virgin valley and at Lightning ridge in New South Wales. These are apt names for opal-bearing ground. The Virgin valley is about a mile above sea level and at one time it was a huge lake into which mountain streams poured both water and driftwood. The prevailing winds carried the driftwood to the north and south sides of the west end of the valley at locations about four miles apart. Here they became buried after volcanic disturbances and then they silicified. The lake then disappeared, the streams were diverted and much of the wood petrified with some of it turning to beautiful opal with red, green and purple fire. The bark of the limb casts is usually black while the interior of the wood is light opal.

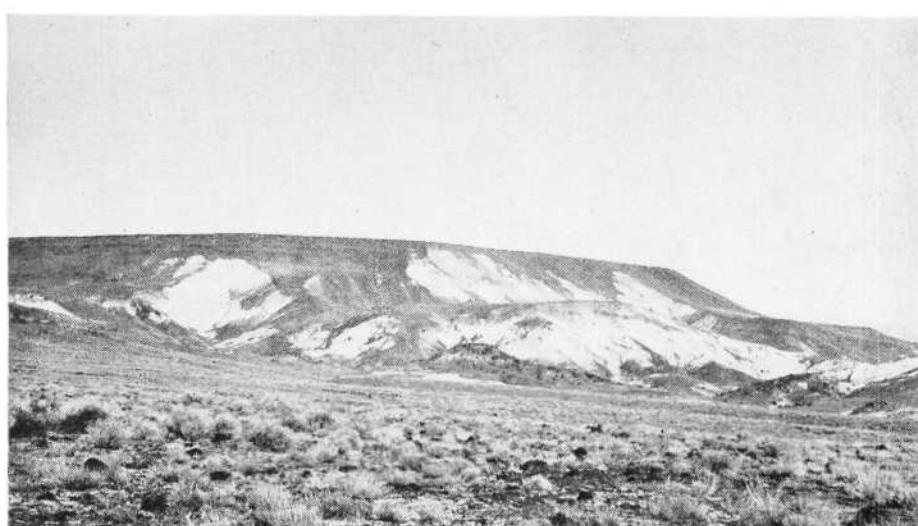
Doctor Chaney, paleobotanist at the University of California, with Richard M. Tullar, former manager of the Sheldon national antelope range of which the valley is a part, collaborated in some research which determined that the matrix of soft lacustrine shales and volcanic ash in which the opals are found are of the upper Mi-

cene or lower Pliocene age. This was confirmed by opalized spruce cones unearthed by Mr. Tullar during the research.

"There always has been a legend of an opal being found about as big as a man's head," Mr. Tullar told me, "but this never has been substantiated. However while I was range manager I saw several opals found in the valley that were as large as a man's fist." The first opal was found by a range rider about 1906 and others were picked up about that time by wandering sheep herders. As word reached the outside world many prospectors came into the valley and filed claims at various locations which were mined with success.

The fish and wild life service of the department of interior, in conjunction with the national grazing services, jointly supervise that section of the country in which the opal fields are located. Contrary to popular belief mining still is allowed in the range, subject to existing mining laws providing the special rules of the service are followed—no hunting, no unleashed domestic animals and no fires without permits. The confusion exists because there are 30,000 acres known as the Sheldon national antelope refuge where no mining of any kind is allowed and where no opals are known to exist.

To the east of the refuge is a much larger area (550,000 acres) known as the Sheldon national antelope range of which the Virgin valley is a small part and all legal mineralogical activities are allowed there. Camp fire and opal hunting permits are readily granted by authorities at range headquarters at the western entrance to the range proper or at the eastern entrance at the Dufareenna sub-headquarters. This enables the authorities to keep a record of all visitors as many people become lost or run out of gas and their continued absence in checking out of the valley would be investigated. The area is isolated and confusing and it also abounds in rattlesnakes so that



One of the ten Lockheed claims located in the white patch at the left of the photo. South side of Virgin Valley. Photo by Belle Rugg.

it is a great protection to be registered in case of emergencies.

Many hardy rockhounds visit the place each year and some of them take away prize gems, others worthless opalite. The prized pieces, which are not plentiful, are the precious opal twigs with entrancing dancing fire. Turn them this way and they are purple, turn them that way and they are green and then as you look at them in awe they suddenly turn red until you would swear they were on fire because you certainly see the flames leaping within. The petrified wood enthusiasts find it easy to make good hauls and persons interested in fluorescent materials find that the opalite fluoresces a beautiful green which is unusual for opal as it usually does not exhibit this phenomenon.

There are only two kinds of opal and they are well named—"common" opal is just that, and "precious" (fire) opal is all that the name implies. Common opal abounds in the valley but the precious opal has to be sought for and dug with hard labor. It is the opinion of most people who have been there that the best pieces are yet to be found just as there is still far more "gold in them hills" than ever has been mined.

The dumps of the old mines have been practically exhausted, for the government had a Civilian Conservation corps established there for a time to improve the roads and the game refuge and the boys tore everything apart rather thoroughly when they heard about the opals. Imagine having nothing to do in your spare time but look for opals in a spot where you know they exist!

The "mines" all have been shallow surface diggings, never more than 15 feet deep and most of them under six feet. When anyone familiar with mining technique stops to consider the treasures that have been taken out of the pock-marked ridges it makes the imagination run riot to dwell on the possibilities of what would happen if timber, water and machinery were at the spot. The only mine operating at this writing is the corporation-owned Rainbow Ridge Opal mine located on patented land. This has been leased to Mark Foster, the present tenant-operator. It is located about four miles south of the Dufarena sub-headquarters. Mr. Foster has opals for sale at reasonable prices and he generously permits visitors to search the dumps of his mine free of charge. He should be addressed at Cedarville, California.

It is characteristic of the Virgin valley opals that they are not improved in color by lapidary treatment. As they are more susceptible than other varieties to crack, because of the internal stress that sometimes causes them to virtually "explode" when being ground, they seldom are cut into finished gems. Those that are cut often develop fractures due to temperature

changes long after they are ground. The opals are all silicified tree casts and occasionally a completely opalized cone is found. They occur in soft sedimentary volcanic ash and in some places trunks of petrified trees still are standing but it is only when water is combined with the silica replacement of wood that true opal occurs. The disappointment in the opals from this region, which caused abandonment of their mining, is that they are difficult to process into finished gems because of their extreme tendency to crack. Many cures supposedly have been found to prevent this but it is doubtful if they have any real value. Possibly soaking them in glycerine would permit opals to soak up a non-evaporating agent to replace water lost by evaporation and thus relieve the internal stress and thereby prevent the cracking.

Sheep and cattle herding and opal mining were the only activities ever undertaken in the valley and now they all have

been abandoned except for the Rainbow Ridge mine which has in the past produced the world's finest opal specimens. There is probably no spot in America today where fewer humans are stirring about. Large herds of the only remaining American antelope are now plentiful and game of many kinds abounds. Even in the old days there were only two ranches, both run by Basques, and the house on one of them, known as the Pink Stone House because it is built of a characteristic native red sandstone, is now the headquarters of the range superintendent.

This Virgin valley is still a virgin land which creates a fever in the mind of any gem hunter. When freedom returns and one can go where he pleases, when he pleases, for as long as he pleases I intend to head immediately for that Nevada wonderland of lavender rocks, really primitive life and those gems that possess everything that makes all other gems entrancing—the opals.

Sez

Hard Rock Shorty of Death Valley . . .



By LON GARRISON

"I don't get insulted easy," remarked Hard Rock Shorty, "but I just run into somethin' that really made me boil. All unprovoked too, the way the guy made these cracks about me."

Hard Rock seethed at the memory of the insults.

"Yes sir—an' he started it all too. He says he'd heard I'd had some interstin' experiences an' he wanted to swap yarns for a while. Said he'd seen some queer things too. Well, that was all right, an' he started.

"'Y' know," he begun, "I kind o' wonder sometimes just how long a burro lives. I unnerstand most of 'em live around 40 years or so, but I had a burro that my granddad had, an' my dad had, an' I give 'im to my boy 10 years ago. That burro was just 89 years old when a truck run into 'im couple of months ago. You ever know any to live that long?"

"I studied that for a minute. That was the kind o' yarn swappin' contest he wanted, was it?

"So I says, 'Hmmmm. That's old all right. I dunno how old they do get but I had once once made me more money in two-three days than I ever seen before.'

"I was campin' up around the head o' Eight Ball Creek an' one day

when I was out huntin' for this onery, four-legged insult to the animals, his tracks led me right onto what I reckernized as a old mine that must o' had a hydraulic rig on 'er. There was a good spring an' water still pourin' into the pipe so I folleder 'er down. Found that down where the placer'd ought to be, a big sand storm'd covered ever'thin' up.

"I remembered then about this mine I'd heard of a long time ago, an' I starts in diggin' it out to see what sort of a prospect he'd had. Do you know, for 40 years, that thing'd been covered up, an' when I got 'er uncovered, found out that hydraulic'd been runnin' under that sand all them years an' the riffle was all ready to clean up after I went up an' shut the water off."

"'Hmmmm,' this feller says. 'Hmmmm. Forty years an' this wa-ter was still runnin' through them pipes?'

"'Yup,' I says.

"He thunk that over for a few minutes.

"'Look,' he says, an' then's when I got insulted, 'Tell you what I'll do. I'll take 49 years off that burro if you'll bust that pipe line!'



Mary Pepo, Pahute basket-maker. By stimulating production and sale of genuine Indian craft, the government hopes to increase the source of livelihood for many Indians as well as preserve a beautiful native art.

MARY Pepo was sunning dried fish in front of her reed and 'dobe house when I parked under the only tree in sight and went to her door.

Mary is an 85-year-old Pahute living in western Nevada among the deeply folded hills surrounding mountain lakes, Walker and Pyramid. Her people farm and graze the land that was the desert hunting grounds and battlefields of her tribe for centuries. From these lakes, set down in the midst of the desert, come tons of fish, caught by the Pahutes and dried over slow fires or in the sun and stored for winter food. The air was thick with the pungent smell as Mary came to welcome me.

A hundred years ago John C. Fremont paused on this very site, to rest from his ambitious travels and study the desert Indians at first hand. Many tales had been told of their ferocious attacks on western bound caravans and their stubborn resis-

tance to army troops bent on exterminating them. Fremont was appalled by their extreme poverty and primitive mode of life. "Humanity in its lowest form and most elementary state of existence," was his report.

If Fremont could visit this land today he would look upon irrigated grain fields and great herds of tribal cattle scattered over the brown hills and watering along the shores of Lake Walker. The agency stands on Fremont's camping ground and on the site of an ancient Pahute village. There Indians have been in the Nevada desert longer than any white man has been in America.

Mary turned the last brown fish and left the sun to do its work while she led me into her house, and placed a packing box for me to use as a chair. Mary Pepo is a kindly gentle woman full of humor and pride in her people, and not for an instant

For 85 years, Mary Pepo has lived in the desert hills of Nevada, absorbing their purple and red and rose brown beauty. And this beauty is reflected in the tribal legends she retells—but most of all in the baskets and bead-work over which she works with loving care. The rich cream-and-brown baskets are traded to other tribes to be used as "Navajo Wedding Baskets" or "Apache Medicine Baskets." The beads are sewed on soft chamois gloves and moccasins, on cradle-board trimming and on a white deerskin dress, deeply fringed and covered with intricate bead pattern of mountains and valleys and clouds and rays of the shining sun. Here is an intimate close-up of a talented member of the Pahute tribe—daughter of the famous Indian scout Truckee.

Craftsman of the Pahutes

By MARGARET STONE
U. S. Indian Service photos

inclined to make any apologies for them. Even though they are sometimes cold, sometimes hungry, always at odds with the government over water for their crops which they say has been diverted by dams to the fields of white farmers. Even though they are constantly feuding with federal officials over the taking of fish eggs from Pyramid Lake and failure to restock their fishing waters; and most of all carrying on unremitting warfare with the great white pelicans for whose protection the government has made a refuge of Lake Pyramid. There the pelicans rest in white clouds and nest on its islands, and, say the Pahutes, consume tons and tons of fish which the Indians need for winter food. Mary is proud of her tribesmen who have survived drought and famine, warfare and aggression of white men, and who live and increase in numbers and prosperity on the desert lands of their forefathers.

"The Pahutes have always lived here," said Mary, busily sorting willow strips for the basket she worked on as she talked.

"Our people first began life right here. Have you heard about the beginning?"

I shook my head and waited for the story which I felt sure would either begin or end with the great flood always featured in Indian stories of creation. I was right.

"For a long time there was no land to be seen anywhere. Water covered it all. But after a while the water began to go away. I guess it soaked into the earth. As the water dropped, Jurangwa (Mount Grant near Walker lake) stood above it and right on the top was a small fire that the water had never reached. The wind came up and high waves were about to beat out the fire—the only fire anywhere in the world—but a sage hen flew against the wind and with her wings beat back the water. The feathers on her breast were burned black by the fire she saved, and even to this day all sage hens have black breasts.

"My people try never to injure a sage hen but often hunger makes it necessary, and then they always build a fire and put those black breast feathers in it to remind

the spirit of the bird that they have not forgotten, but that hunger was too strong.

"After the great water went away leaving our land as it is now, Numinaa (Our Father) stepped out of Jurangwa where the small fire had kept him warm and dry, and went to the Great Sink, the last place the water left, and there made his home. Ibidsii (Our Pahute Mother) followed him and was his wife. They had two boys and two girls, and the father taught the boys to hunt with bow and arrows while our mother made sticks and taught the girls to dig roots.

"One boy and one girl went to Pyramid lake and became fish eaters. My people are from them. The other boy and girl went north and ate raw buffalo. Thus the Pahutes were scattered. After the children went away our parents went back to Jurangwa and disappeared in the mountain."

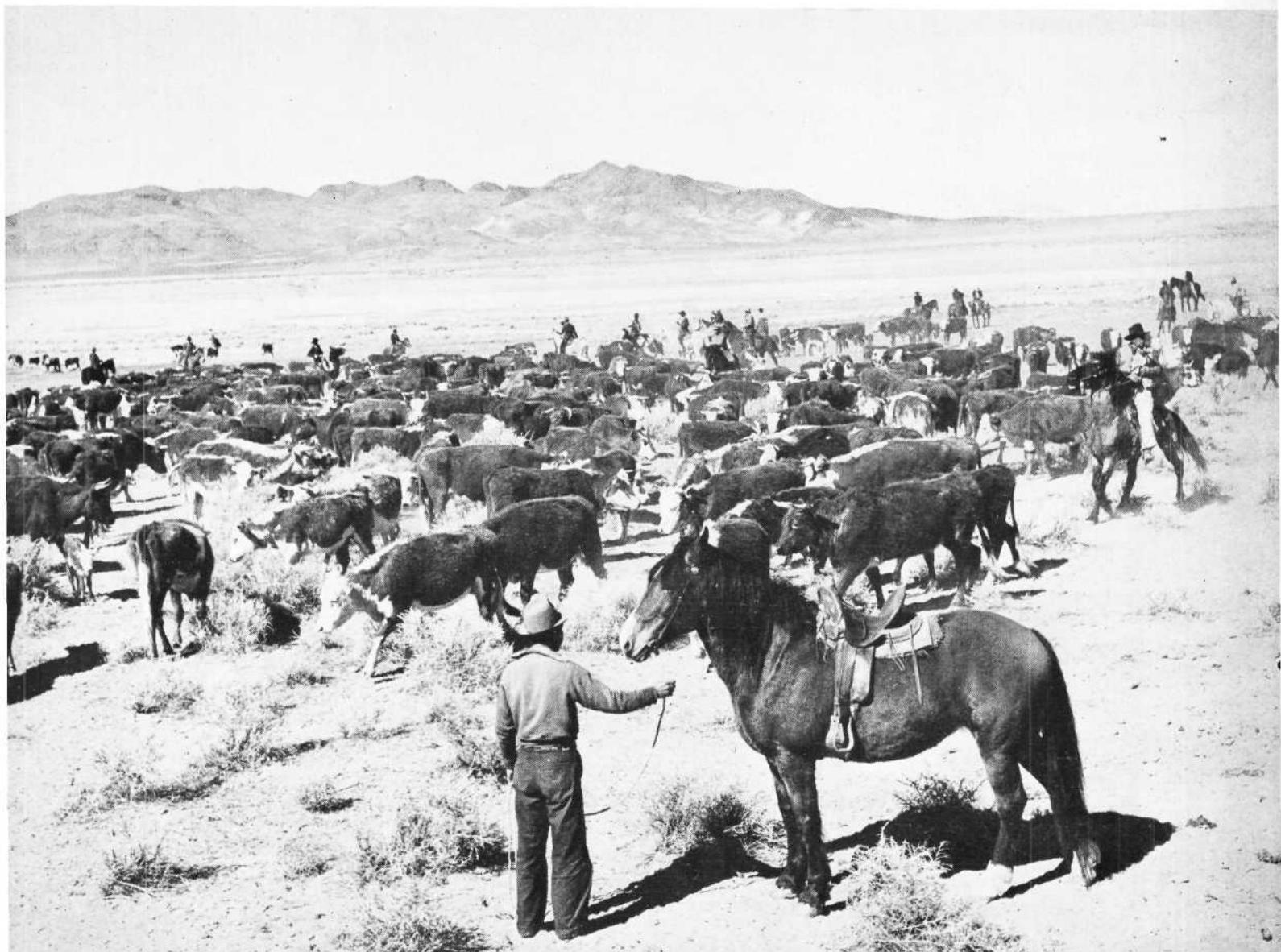
While she told the story I studied her and her home. She was slender and erect for her 85 years and her eyes were as bright and clear as a girl's. Around her

head she wore a green silk scarf tied gypsy-wise. Her figured cotton dress was clean and over it she had tied a checkered apron. Navajo rings were on her fingers and her feet were covered with saffron colored buckskin moccasins hand-sewed and decorated with beads. They were of her own making she said.

Her house was a long narrow structure made of split cottonwood poles, reeds and adobe. It was divided into two rooms and two small windows gave light. The floor was hard packed earth and the roof was reeds covered with dirt. In the room where we sat was an iron bedstead, the mattress covered with a handwoven blanket such as I had not seen among Indian work. Mary explained that it was the weaving of a Shoshone neighbor of hers, and that it was traded to her by the weaver for baskets and moccasins.

Many Shoshone Indians live among the Washoe and Pahutes in western Nevada, but the Pahutes number almost 6,000 and are by far the larger tribe. Hopi Katchina dolls and red ceremonial sashes hung on

Indians round up their own cattle on Pyramid Lake Indian reservation which surrounds Pyramid Lake in Nevada. Herds were started with a small number of cattle advanced by the government. They are now repaying the government's loan with cattle.





This is the baby of Amy Jones, Washoe Indian girl who was taken into the Pyramid Lake Pahute band when she married a Pahute Indian. Amy is secretary of the tribal council.

the walls with painted ceremonial gourds and headdresses from the Rio Grande Indian villages.

"We trade with all the other tribes for the things they want and do not make. They like our beaded gloves and moccasins,

Pahute home—a long narrow structure made of split cottonwood poles, reeds and adobe.



sins, and they use only our shallow mush bowls in the Navajo and Apache healing dances." She held up the basket she was making. "This is going to be what is called 'Navajo Wedding Basket,' or 'Apache Medicine Basket.'"

I could see that she was making one of the large shallow mush bowls that figure so prominently in all Navajo ceremonies from weddings to burials. It is usually 12 or 14 inches across, and woven in rather wide coils, the covering being the aromatic sumac, which is split to the width desired by the maker and left either its original cream color or dyed a reddish brown with mountain mahogany dye to be used in the pattern always woven into such a basket.

This pattern is a sort of square cross joined to similar square crosses forming a circle around the basket, with just one opening in the pattern. This opening occurs at the same place in the basket where the end of weaving is discernible. The circle is left open, not to let out evil spirits, but so that the place of souls will not be closed thus cutting off future births into the Pahute tribe. With use and from the oily meal used in the bowls they acquire a sheen that gives them unusual beauty. I wonder if many people witnessing Apache and Navajo ceremonies and later purchasing similar baskets know they are the work of Nevada Pahutes and not really "Navajo" baskets at all.

Mary Pepo showed me the carrying baskets she had woven and uses when she gathers plants and basket materials. They are very similar to Apache burden baskets.

And the water jars covered with piñon gum could be mistaken for those of the Supais, Hualpais or the Apaches. These

three styles seem to exhaust their basket making talents.

While we were talking a beautiful Indian girl came bringing her baby on her back. The baby was laced firmly to a native cradle-board with a basketry canopy and fine beaded buckskin trimmings. The old lady forgot me and her basket making while she gathered the cradle-board into her arms and crooned to the child in the Pahute tongue. Such a proud great grandmother!

The baby's mother was a Washoe girl married to a Pahute, and adopted into the tribe because of the marriage. She was the secretary of the tribal council for the Pahutes, and a very modern and charming girl. Still she clings to the carrying board for her lusty young chieftain, and makes sure his back will be straight and strong by keeping him laced to it. She tossed the cradled baby to his place on her back and he watched us with round unwinking stare as his mother carried him away.

"When I was a girl"—how often had I heard white women begin criticism of the younger generation with those very words—"when I was a girl, women did not choose their husbands as that one did. We married in our own tribe and we married the men our fathers chose for us. I was promised to my father's best friend even before I could weave a basket or smoke fish for winter storing. My father was a great man in the councils. He guided white men when they first came to our desert and the river Truckee is called for him. Never was a party lost in the great salt sinks when he was the guide."

"Did you like the husband your father chose for you?" She went back mentally some 70 years and considered the matter.

"I can't think much about it now. He was old and soon he died and then I married a man of my own choosing. A widow can do that."

"All that I can remember is that he wanted beans cooked like the white people cooked them, boiled and boiled and with fat meat in them. I wish I knew his grave so that it could have flowers on it when the other graves have."

I did not question her about this, because I had heard how the Pahute women and children go up into the mountains on Memorial day which they have taken as some special day of their own, and bring huge baskets of wild flowers down to the valley, covering every grave with them. Pahutes never have cremated their dead, and they keep moving the limbs of dead warriors until they are buried in order that they will not go into the hunting fields of the other world with arms too stiff to draw a bow.

"My people used to go out into the mountains and gather huge baskets of pine nuts and store them for winter. My son who works with the government on making the water run in the ditches through the fields, always goes with me even these

days and we store many baskets full of them to eat in the winter time.

"It was always time for a rabbit hunt after the pine nuts were gathered. All the women and children formed a great circle and beat the grass and bushes with sticks and shouted until the rabbits went into the center of the ring. The men waited there and killed them. We took the skins and dried them and wove them into blankets, and the meat was torn from the bones and dried for winter use.

"Now we dry and smoke only the cui-ui (pronounced kwee-wee). Next week we go to the "lake where the cui-ui live" and you should be there to see the great fish and how we take them and smoke them." I firmly resolved to be there.

Mary reached under the bed and brought out a box. From it she unwrapped a garment she was making out of white deerskin. It was as soft as chamois and the yoke of the blouse was deeply fringed and covered with intricate beading in delicate

colors. Here was a work of love by an artist. This native maiden's dress was to be worn at the Gallup Ceremonial in August and the old grandmother was doing the outstanding work of her life in order that it might be perfect in every way. The pattern was of mountains and valleys and clouds and rays of the shining sun. The skirt had no beading but a deep fringe of the deerskin was around the bottom instead of a hem. Here was a garment worth its weight in silver.

Almost all the Pahute women smoke and tan buckskin out of which they shape gloves and moccasins for sale to trading posts and tourists. But this ceremonial dress for a modern Pahute girl was the most beautiful Indian work I ever have seen. Only a fine oil painting could compare with it.

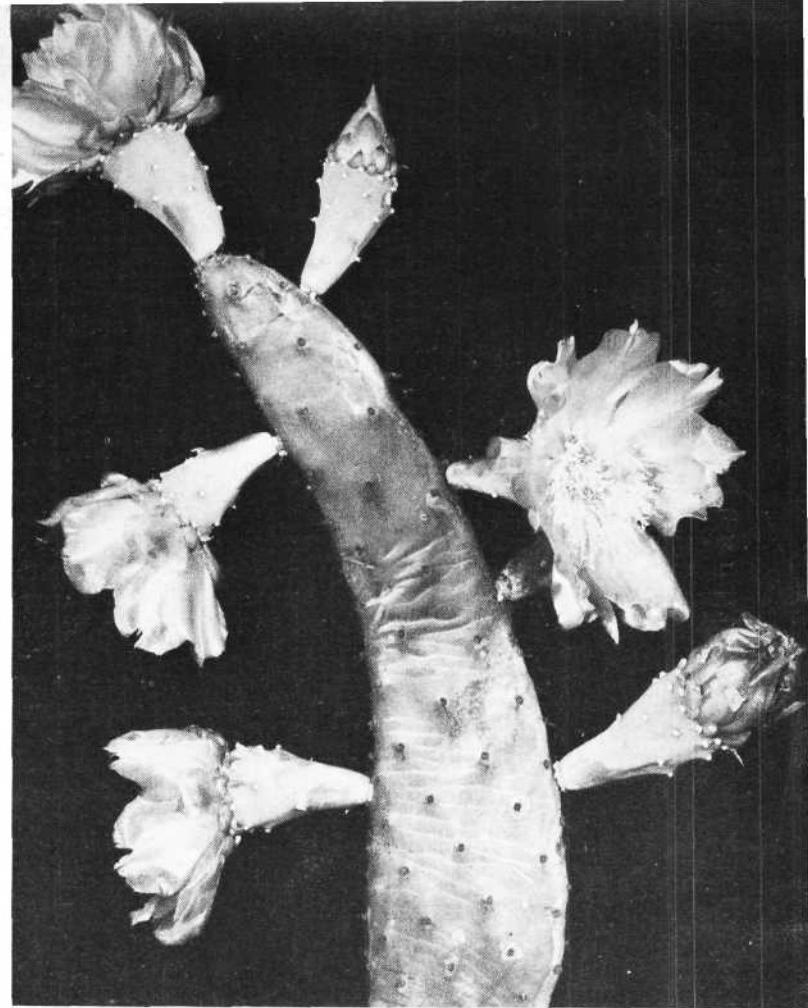
Mary Pepo has not spent her life in the hills of the Pahute desert without absorbing their purple and red and rose brown beauty.

Shoshone Indian woman with rugs of her own weaving, outside her home on Walker River reservation, north of Walker Lake, Nevada.





1



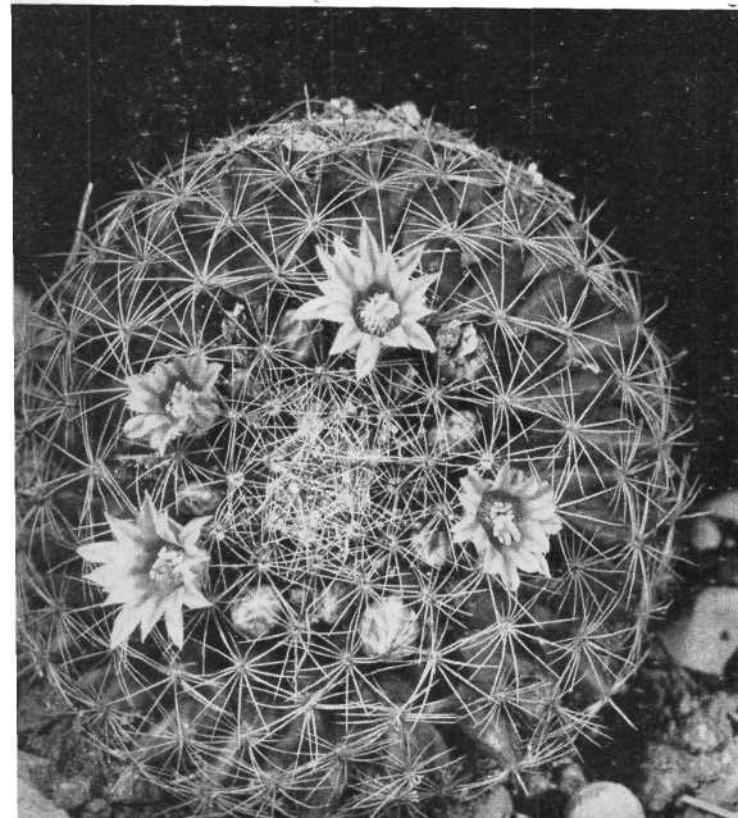
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Six Members of the Cactus Clan

Text and photographs by

MISS J. CASEY

6



PINEAPPLE CACTUS

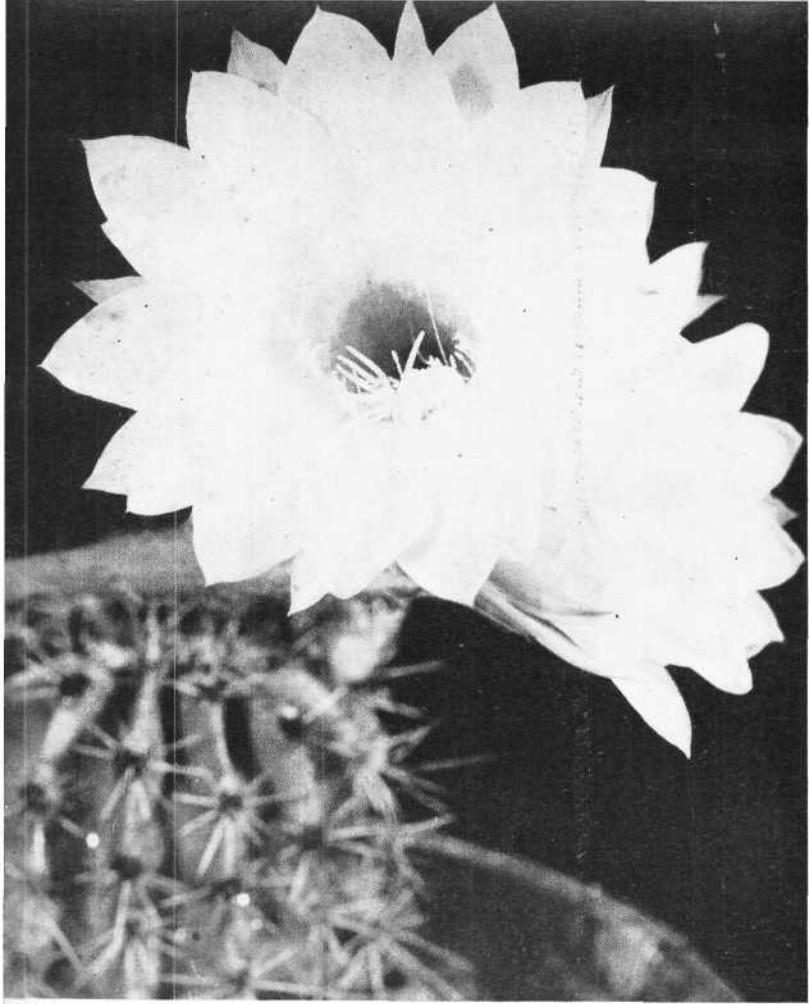
1—**Hamatocactus setispinus.** For three consecutive days large lemon yellow flowers with vivid red or deep maroon centers open about noon and close near sunset on this pineapple-shaped cactus. It blooms between June and September and is easily flowered in cultivation. The flowers have a peculiarly attractive odor which seems especially pleasing to bees. Found in northern Mexico and southern Texas, especially under mesquite trees.

LENGUA DE VACA

2—**Opuntia linguiformis.** Named from the elongated, tapering pads shaped like a cow's tongue. The joints sometimes reach three feet. A rare species found growing in a limited area only in southwest Texas. Its large yellow or goldish blossoms are similar in shape and color to ordinary prickly pears. A valuable honey producing plant.

QUEEN OF THE NIGHT

3—**Acanthocereus pentagonus.** One of nature's most perfect flowers. The overlapping petals are delicately tinted pink, shading to darker inside. From the deep throat of the long slender floral tube emerge numerous bright yellow stamens. The extremely fragrant blossoms



3

open at dusk and close at dawn. The plant is slender, pliant and semi-trailing. Very limited area, extreme southern Texas.

LACE CACTUS

4—**Echinocereus reichenbachii.** One of the most popular of all Texas species because it produces such gorgeous blossoms and can be handled with the bare hands. Shades from a delicate pink to a vivid red, two to three inches across. Opens and closes with the sun, lasting several days. The stamens, in several rows, are a bright yellow and circle a ten-rayed stigma. Flowers for about a month beginning the middle of May. Widespread in Texas, especially plentiful in the limestone hills of the Edwards Plateau in south central Texas.

PENCIL CHOLLA

5—**Opuntia arbuscula.** Petals usually yellow, green or terra-cotta, the flowers an inch or less across. Ripe fruit is green, tinged with red or purple. Plant is a tree-like shrub with compactly branched crown and well developed trunk, sometimes six and seven feet high. Papago Indians used young joints as boiled vegetable, but probably only in times of want. Found in sandy washes and in the heavy soils of desert valleys and plains, especially from Salt River valley to Pima county and west Santa Cruz county of Arizona. Photo by Norton Allen.

DEVIL'S PINCUSHION

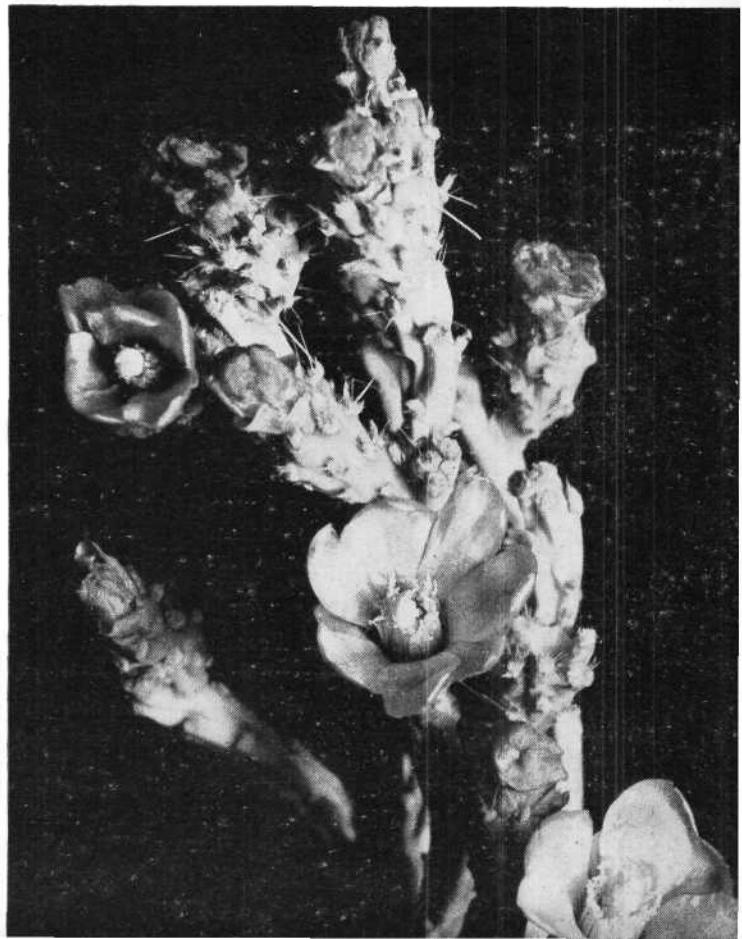
6—**Neomammillaria hemisphaerica.** The greenish-pink small flowers are not nearly as conspicuous as the scarlet club-shaped fruits, which take from six months to a year to develop, often appearing with next year's blossoms. Fruits are called "Chillitos" by the Mexicans

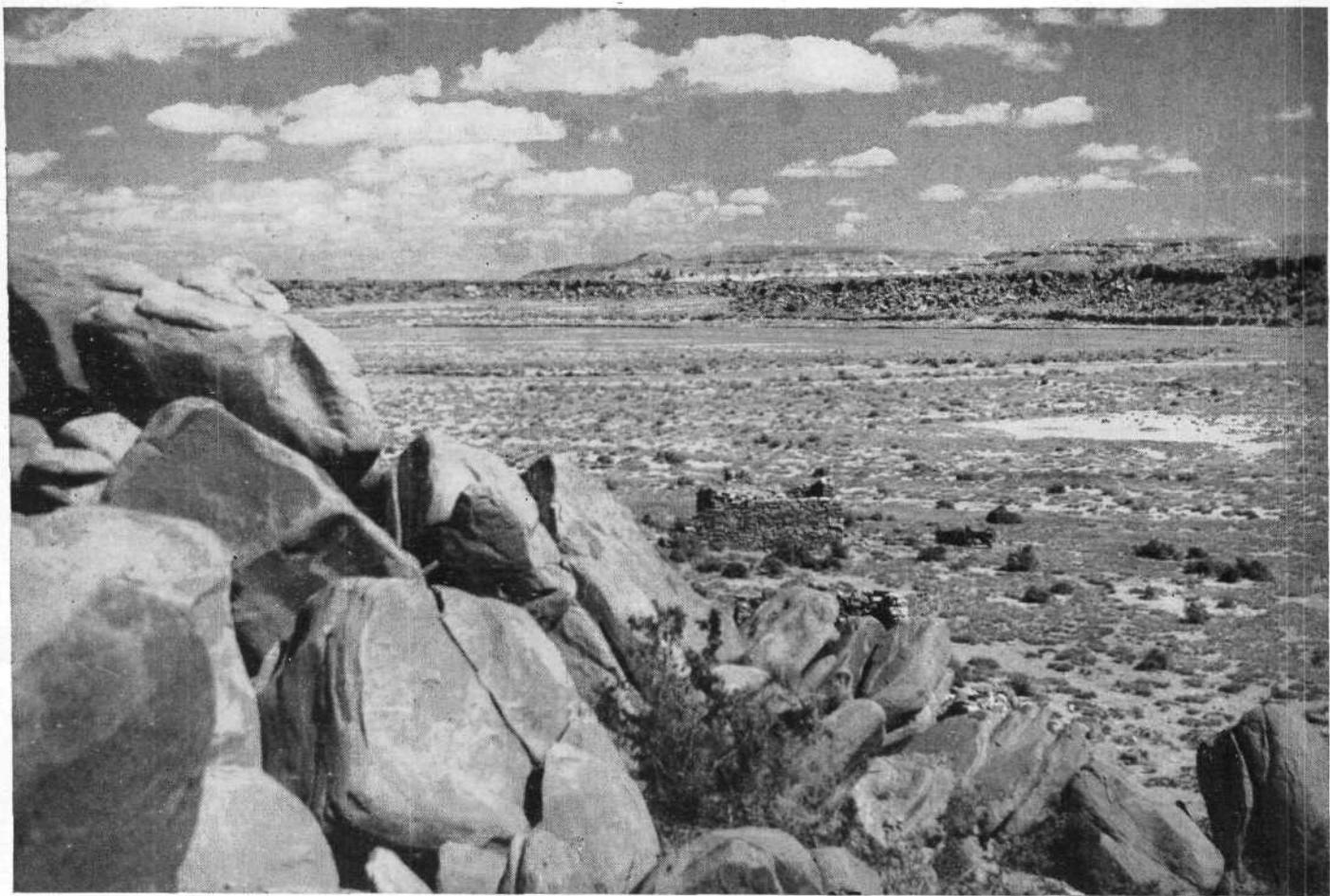


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because they resemble a red pepper. Found in Texas as far north as Edwards Plateau, extending in a southwesterly direction reaching the Big Bend area.

5





Here in the Big Carriso wash, in a setting of brick colored sandstone walls and variegated pastels of the Painted Desert, Van Valkenburgh found the unknown Spanish inscription. Old stage station ruin in center foreground.

Spanish Inscription in the Big Carriso

By RICHARD VAN VALKENBURGH

Map drawn by Norton Allen

IT WAS nearing noon when I urged my pickup up the long slope that leads to the summit at Painted Desert View some 25 miles east of Holbrook, Arizona. The sign OLD STAGE STATION caught my eye. I stopped there for lunch. While the owner, Mrs. Nora Lee Rice, served me I asked her what she knew of the old stage station reputed to be hidden in the mauve and buff badland to the north.

After a pause Mrs. Rice answered, "I

named my place for the station. The ruins are on the west bank of the Big Carriso. There are many Indian pictures there as well as the inscriptions of soldiers and emigrants. The last time I was down there I found a new one—the inscription of some Spaniard!"

To the "dyed-in-the-wool" inscription hunter this was live bait! Pulling out my field book I carefully mapped Mrs. Rice's directions. The sun was high—there was no time like the present. After my kind in-

Old Spanish inscriptions still are being discovered in the Southwest. Among some of the most intriguing are those which leave no clue as to the identity of the "autographer." A chance stop for lunch started Richard Van Valkenburgh off on another search for an unidentified inscription. Driving up the white sands of Big Carriso wash, in northern Arizona, he came upon the ruins of an old stage station, where he found ancient Indian petroglyphs mingled with the names of pioneer Mormon settlers, soldiers, cowboys, emigrants—and nearby the autograph of an unknown Spaniard, dated 1811.

formant's parting "Watch that sand arroyo!" I bade her adios and headed for the Big Carriso.

Backtracking on Highway 66, I watched for a gate in the fence that bounded the north barrow-pit of the road. After an eighth of a mile I spotted the break in the barbed wire. Turning north I passed through the gate. Inside the fence I bumped along a thin trail dodging prairie-dog holes and "nigger-heads" of petrified wood.

Soon I reached the rounded summit of a blue clay hill that dominated the region. Westward, 66 was a sooty river flowing over the straw-colored hills finally fading in the dusty haze rolling up from the bed of the Rio Puerco. Eastward, the point upon which the Painted Desert Inn squats was a layered mirage of pastels laid against the black massif of Rabbit mountain.

Far in the north—beyond the jumble of variegated colors and tones of the Desierto Pintado rose the rusty black fingers of the Moqui Buttes. To the south, across the white thread of the Puerco were the high rims that mark the border of the petrified forest. It was not difficult to see why the Navajo call them *Atsádiibíisi*, Lonely Clouds.

My trail led downward to where the bone-white sands of the Big Carrizo grind in from the northeast through brick colored walls of Moencopi sandstone. Soon I reached the crumbly bank of the arroyo of which Mrs. Rice had warned me. Giving the pickup the gas I swerved and swayed as my tires spun me upon the farther bank.

Some 100 paces farther on my car travel was abruptly terminated by a culdesac of low, but sheer sandstone walls. After picking up a few choice spawls from the surface litter of petrified wood, eroded out from the thin stratum of the Chinlé for-



A close up view of the station ruins.

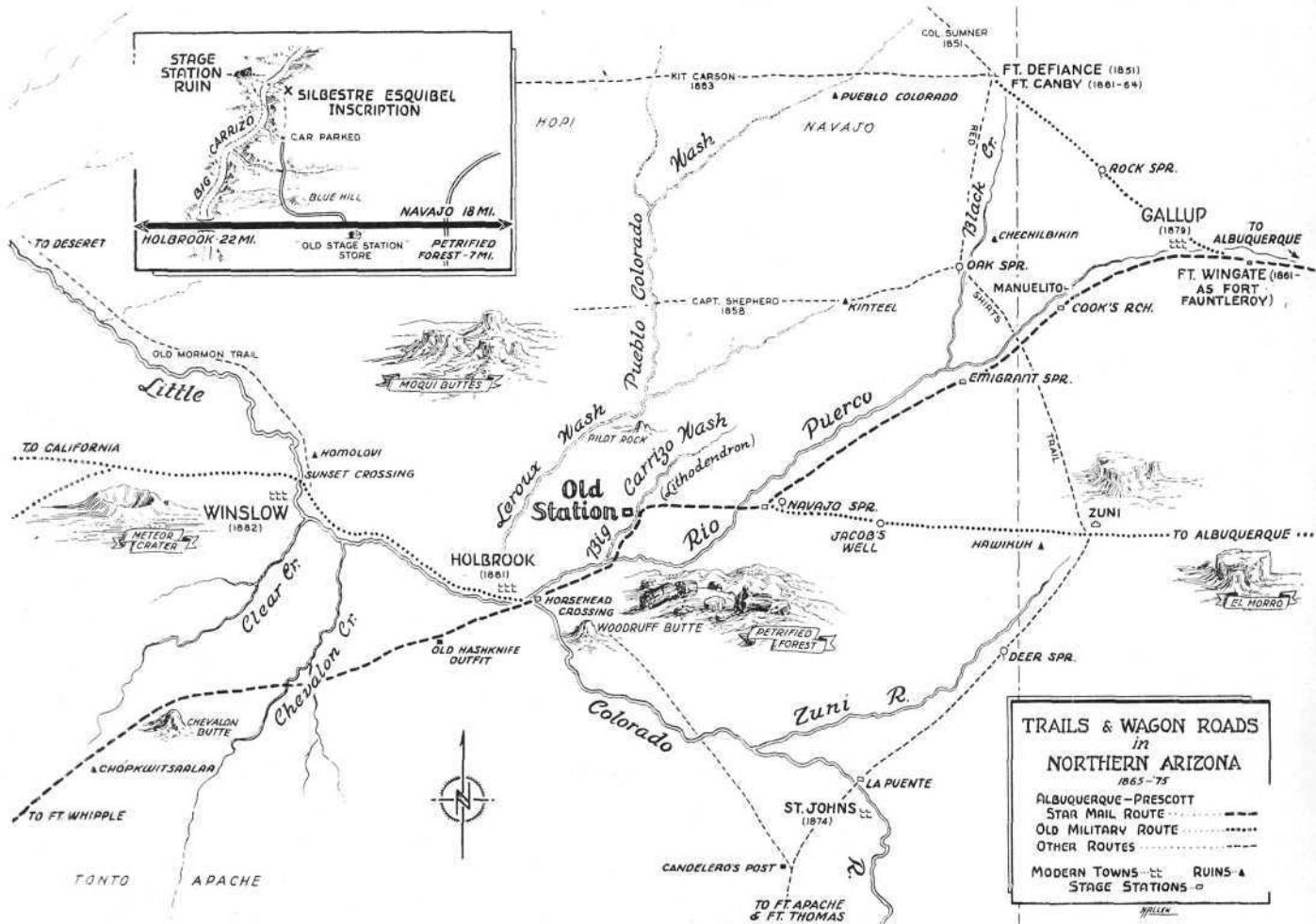
mation, I slung on my camera-bag and started out on foot.

Following the broken walls of a small cove scooped out in the sandstone I made slow progress. I searched the smooth face of every rock for inscriptions. My only reward before reaching where the rincon fanned out and dumped into the Carrizo was a series of ancient Anasazib folk glyphs.

A gentle breeze stirred up small "wind-

devils" in the bottom of the wide wash. From nearby came an unearthly groaning! Quickly climbing to a vantage point I looked around. Up the wash—lonesome against the autumn blue hardness of the sky an ancient windmill rattled as it creakily spun in the swelling wind.

My first effort to cross the wash was quickly frustrated. The crusted surface broke. Sucking quicksand pulled me in to my boot-tops. Grabbing a chico root I



pulled myself out. Remembering the Navajo lore taught me by old Red-Streak-Man in the Canyon de Chelly, I looked for "a place where water moves!"

After working through a pile of shattered sandstone that had tumbled down and finding the bottom of the quicksand that lurked under the bank, I looked around for a crossing. Below me lay danger—dirty bubbles belched up from bile colored pools. Going upstream I found a place where the bed had widened.

Slinging my boots over my shoulder I carefully started to pick my way across. In moist spots there was a slight quivering. When this started I moved swiftly forward rather than jump. Finally I found a live stream that swung out from the farther bank. Digging my toes into the hard riffles in its firm bed I soon was on solid ground under the old windmill.

The water in the *tanque* beneath the windmill was good. I started up the slope that ended at the rimrock. Piles of stone lying out from the low cliffs caught my eye. When I drew near I identified them as the litter from fallen buildings.

One roughly coarsed sandstone room still stood. Back of this was a stone fireplace similar to some of those found in old New Mexican houses. The surface of the ground was covered with scraps of rusted metal, broken crockery and decaying timbers.

After some study I reconstructed the layout of the old station. The main building and possibly the residence of the lonely station-keeper had been composed of three small rooms. Back of this was an outbuilding—possibly a storeroom. Nearby was a stone corral and a lean-to stable.

The site had been chosen under the spur of a low ruin that juts eastward from the Moencopi sandstone walls that bound the Big Carriso. Working through the boulders that seemed to have been chiseled off from the U-shaped point, I found myself in a veritable "autograph album in the rocks."

The ancient petroglyphs of the *Anasazib* were easily recognizable. Another small group resembled those of the Hopi clan symbols on the old salt trail between Moencopi and the bottom of the Little Colorado river gorge. There were also those of pioneer Mormon settlers of northern Arizona. Mixed with these were scratches of soldiers, cowboys, and emigrants. But nowhere did I find any Spanish inscription!

In two hours I had all the glyphs and inscriptions entered in my note book. The sun was warm—the place was peaceful and quiet. Nearby was a large rock. Stretching out on its warm flat surface I sunned my-



Remains of the fireplace of the old stage station.

self as the pageant of the past marched before me:

On the knolls beyond, thin spirals of grey smoke etched a tracery against the blue sky as they rose from the earthen domes of a pit-house settlement of the Anasazib. Down in the wash Indian women scoop up water from the charcos with brightly decorated jugs as naked children play in the warm sand.

The dusty scroll of time unfolds a few hundred years and the scene shifts:

Out of the east rides a Spanish entrada.

Zuñi guides in their cotton pants lead them down the wash. Behind them leather-clad muleteers restrain their gaunt mules as they smell water. In their midst rides El Don who searches this terra incognita for new domain for El Rey.

The stream of history moves on:

The "Mountain Man," Anton Leroux, guides Captain Lorenzo Sitgreaves, U.S.A., on his expedition to explore the Zuñi and Colorado river for a steamboat route to the Gulf of California. Following them, pass Lieut. Edward F. Beale surveying his wa-

The unidentified Silvestre Esquibel inscription.





© SPENCE
Air Photo

—Spence air photo.

gon road from Fort Defiance to the Colorado river. On the flat below, guarded by Beale's Delaware Indian braves, Uncle Sam's camels pasture.

Like a reversed motion picture the walls of the old station fly back into place:

Some hardbitten customer and his New Mexican peons throw up the rough stone walls. They build a veritable fort with loopholes and low doors. For not only were they on the borderland of the bloody Apache, but up to the north on the Lithodendron Wash is the hangout of the road-agents at Robber's Roost.

Down the wash rolls a cloud of dust. Out of it comes the rattling buckboard of the Santa Fe-Prescott Star mail route. Packed in between by the piled mail bags and express the dust-grimed travelers hold on for dear life as the driver jerks his four broncs back to their haunches.

While the bruised travelers stretch and wash the gyp-dust from their stinging eyes the station keeper and the driver "pass the time o' day." Peons pull off the dust-caked horses. From out of the stone corral fresh horses buck and kick as they are forced into the traces.

The driver howls, "Let 'er go!" The travelers clamber aboard. The snaky whip cracks over the bucking team. Like a shot they wheel down the wash and swerve up the dugway that leads to the west.

The cool of the creeping shadows of

SOMEWHERE IN CALIFORNIA

Who can identify this picture?

PRIZE CONTEST ANNOUNCEMENT . . .

Landmark photo for April was taken in a mining area of California, rich both in minerals and colorful history.

In order to present the interesting story of this place Desert Magazine will award \$5.00 to the reader who submits the most complete and accurate story of not more than 500 words.

Manuscript should contain history, de-

scription, summary of the activities carried on here, location and accessibility and as much other pertinent information as is available.

Entries should be addressed to Landmarks Contest, Desert Magazine, El Centro, California. To be eligible they must reach this office by April 20, 1943. The winning story will be published in the June issue of Desert Magazine.

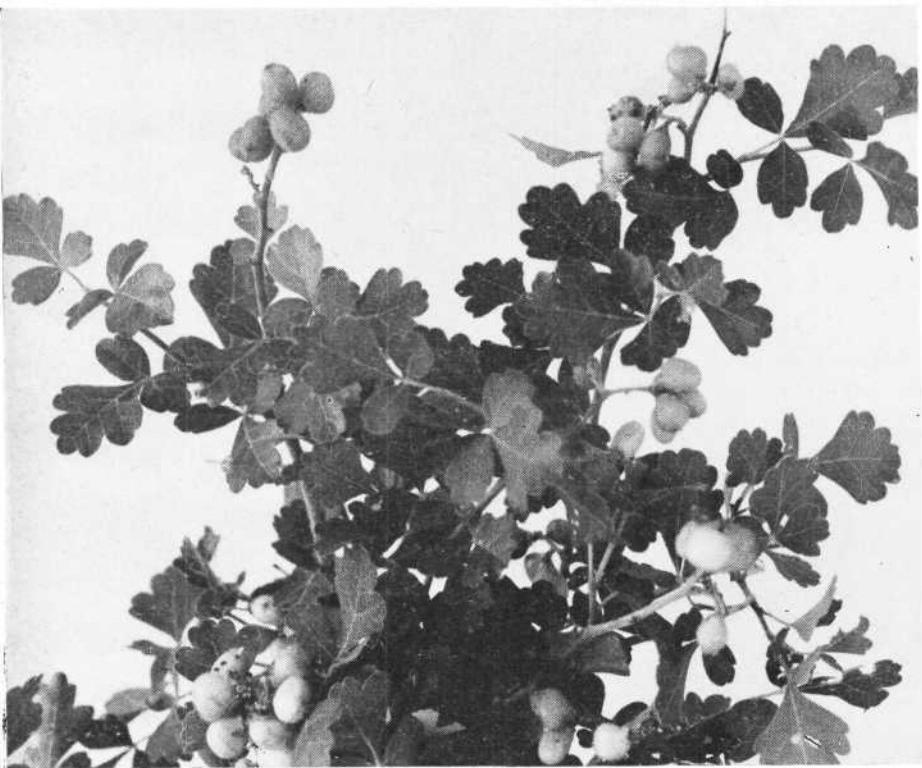
the late afternoon stirred me from my daydreams. One more thorough combing of the rocks convinced me that there were no Spanish inscriptions thereabouts. After making my pictures I routed my return. A small draw that lay directly across from the station looked like a good place for inscriptions.

After recrossing the Big Carrizo I started to comb the walls of the draw. My disappointment welled as I worked upward toward the low saddle that marked the summit. One series of boulders remained. I decided to pass it by—then I forced myself to take one last look. I climbed to the

shattered pile that nestled under the rim. Before me was the inscription:

SILBESTRE ESQUIBEL 1811

On my return to Window Rock I wondered of Silbestre Esquibel? Was he a soldier, trader, explorer? Search of references pertaining to the period gave no clue. Like Pedro de Montoya whose 1666 inscription was discovered by Roy Dunn and myself at Howye Spring in 1938, Esquibel remains as one of those unidentified phantoms who perpetuated their names on the rocks by the water-holes of northern Arizona.



A close-up of the desert Sumac, or Squaw Bush, showing the trifoliate leaves, a characteristic shared by its notorious relative the Poison Oak.

Basket Maker and Thirst Quencher for the Indian

By MARY BEAL

VARIOUSLY called Squaw Bush, Squaw Berry, Skunk Bush, and Stink Bush, the desert's representative of the Sumac family is one of the useful members of the clan. Some of its close relatives in other sections of the country are not desirable neighbors, having the unfriendly habit of poisoning those who contact them, the most notorious being Poison Oak and Poison Ivy.

The Squaw Bush carries the scientific name *Rhus trilobata*, the variety *anisophylla* being more common than the species in the desert. It thrives in the higher mountain ranges of the eastern Mojave and northern Colorado deserts, the Panamints, the Charleston and other southwestern Nevada mountains, into Arizona and Utah. It is most frequently found above 4,000 feet and is one of the plants highly prized by the native tribes of those areas.

It is a handsome, much-branched, deciduous shrub 3 to 6 feet or more high, with bright deep-green leaves, which are trifoliate, the end leaflet much the larger, the lateral leaflets unequal, all more or less scalloped. The under side of the leaf-

lets is paler and somewhat hairy. The tiny yellow flowers are crowded into clustered spikes, appearing before the leaves are much in evidence. The flattened bright-red fruits are berry-like, the one smooth seed covered with a very thin layer of flesh, clothed with sticky hairs.

The Indians found many uses for them. A refreshing drink was made from the ripening berries. While still green they made a much-relished appetizer, eaten with salt. Well-ripened they went into the mortars to be ground into meal, the acid flavor no doubt adding zest to other foodstuffs. Well I know the refreshing quality of these strongly acid fruits. Many times on day-long climbs up the canyons of the Providence mountains I have relieved the dryness of a thirsty mouth by holding a few of the sour sticky berries in my mouth.

The tough pliable stems supply excellent material for basketmaking. The grey bark of the slender branchlets is peeled off and the stems split into a few long thin strips, which are wrapped tightly around a slender core of long-stemmed

grass, and coiled into basket shape. With such varied uses in the domestic economy of the Indian the name Squaw Bush naturally attached itself to the shrub.

The stems and foliage diffuse an aromatic fragrance, more noticeable when crushed, which is considered disagreeable by many. It is not unpleasant to me but enough people dislike it to entitle the expressive appellations Skunk Bush and Stink Bush to permanence in print.

Rhus ovata

An evergreen species of Sumac, found less frequently on the desert, is the Sugar Bush. It is a very attractive shrub, 6 to 18 feet or more high, found in the foothills of the Coast range but more commonly in the mountain areas farther inland, extending into the desert and even venturing to cross the Colorado desert into Arizona, particularly in the cholla and saguaro regions.

It is a sizable sturdy shrub, broad, compact and rounded, sometimes a small tree with a substantial trunk and broad top. The stems are not pliant as are those of the Squaw Bush, but firmly rigid, the young branches often tinged with red, the old ones with a rough, dull-brown, shaggy bark. The large leathery leaves are ovate, sharply pointed and usually entire, a rich, glossy, bright-green, a bit paler on the under side.

The flower buds are deep red and the opened blossoms cream-colored or pinkish, less than one-quarter inch across but so delightfully profuse they make a fine appearance in the spring pageant. The short close spikes are clustered in panicles terminating the branchlets. The fruit is a deep-red, sticky-hairy drupe, commonly called a berry.

The sweet, waxy covering of the acid berry was used by the Indians as sugar. They also made a delectable dish of the flowers, boiled, and an infusion made from the leaves was used for chest colds and coughs. A handful of the berries put into the olla transformed the water into a flavorsome drink. For the bees the flowering Sugar Bushes were a fine honey garden, adding another quota to the Indian larder.

• • •

Survey of plant life in Chiricahua national monument, Arizona, shows a total of at least 467 species, representing 257 genera and 80 families. Specimens collected by Ranger Ora M. Clark have been placed in the monument museum for public inspection.

• • •

Vegetation of the Grand Canyon occurring within the vertical space of one mile and horizontal space of 10 to 20 miles includes nearly all types of plants to be found within the entire state of Arizona. It is possible to descend in a few hours from pines and firs to mesquite and cacti.

The South family have become printers and publishers. The first type and press were homemade, the design for the press being studied from a postage stamp with the aid of a magnifying glass. Their first publication was a strictly limited edition, but bore the proud insignia of The Yaquitepec Press. "Yaquitepec" for their abandoned wilderness home on Ghost mountain at the edge of the Colorado desert.

Desert Refuge

By MARSHAL SOUTH

CRACKLE of burning wood in the grey light of dawn—the aromatic tang of smoke lifting like incense in the chill morning air. Before the sun climbs above the ridge to eastward there is still the glitter of hoar frost upon the stems of dry grass and upon the black piles of fallen brushwood. Rudyard and Victoria have figured out a theory of their own to account for hoar frost. To them the sparkling crystals are "frozen moonlight"—a fanciful notion which despite error has much to be said for it.

A wood fire is a subject which easily arouses enthusiasm—nor is this reaction dependent upon chilly mornings. Cold or heat, dawnlight or dark the red flicker of fire flames through dry wood calls forth a mysterious "something" in the heart of every man who is not an utter clod. Perhaps this is because campfires and freedom have been so closely linked together in man's history, ever since he clambered above the groping intelligence of the brutes. The campfire in the cave, the campfire in the forest, upon the barren mountaintop, in the lone reaches of the desert—around those raw, leaping flames have always gathered the pioneers, the rebels, the defiant souls who would not wear the collar and chain of an ordered life fashioned by mass-minds.

Wood fires have solid, practical virtues about them too. There is more health to food cooked over wood flame. No other heat, no matter how "modern" and highly endorsed or chromium plated can begin to approach wood in its virtues of healthful and flavorful cooking. Maybe your scientists will scoff loudly at this. No matter. Let them continue to tinker with their gadgets and switches. But for a wholesome, satisfying meal, literally bursting with goodness and with every last particle of flavor brought out to perfection, we barbarians of the wasteland will vote for wood every time.

There is a logical explanation for this, for the thing is most certainly not "imagination." The reason is deep buried in laws of which we know little. Fundamentally it is a matter of vibration. Each different substance gives out a vibration that is peculiarly its own. There is a subtle difference in the quality of the heat given out by different fuels and heating methods. These different vibrations act upon the food. And thus, directly, upon the health of the eater.

In these days, modern housewives have brought about an avalanche of "refined" cooking methods—at who shall say what staggering costs in health. Even the devitalized "staff of life" limping in pallid spinelessness, as though ashamed of its spurious art-tan complexion, is only the hollow ghost of those husky bouncing loaves of crusty healthfulness which came from the bread baking ovens of our grandmothers. You found ash flakes on the under side of those loaves very often. And occasionally an honest black fragment of charcoal. But when you



Tanya stirs a stew cooking before the little mud oven.

bit into a slice from one of those loaves there was flavor and health; you were eating real food.

Sometimes, since we left Yaquitepec, I have been sorry that we ever built the tiny little mud oven that was our first home-making work. We set it up in the midst of the rocks and mescal in the wilderness of the mountain top—carrying the water to make the mud for it up the mountain on our backs and tramping its adobe floor level with our bare feet. Its low, flattish dome was reared of juniper branches thickly covered with clay.

A little oven, but efficient. We baked bread in it and we cooked savory stews in black iron pots before the heat of its open door. Around it we built our home. Yet now, sometimes I am sorry that we ever made it. For the thing has become uncanny—we must have built into it something more than we knew. Often in the hushed watches of the night, while the stars twinkle and the night wind whispers softly to itself among the creosote bushes, that little old mud oven reached out across the long, lonely leagues and tugs insistently at heart strings.

Bluebirds driving in a gusty whirl of color past the grey poles of the old corral—cottonwoods bright and sparkling in a glory of new leaf. Along the fence in the lee of a piled mass of last year's tumbleweeds, Betty, Rider's special pet goat, is rummaging happily for fresh green grass. Yes spring is here. The deep, throbbing heart of the earth pours out new life and hope and the world of the desert rouses to begin another year.

Rider is setting type. The composing stick is crude and home made and he has to handle it warily to avoid spilling out the letters as he reaches about the type case picking out A's and E's and T's with painstaking precision. Rider sets type quite well and seldom makes mistakes. With a natural aptitude for anything mechanical requiring care he has taken to printing like a duck to water.

Rudyard prints too—with weird wooden type of his own construction, sawed with much puffing and nose wrinkling from odd scraps of old wooden boxes. Rudyard's type—and the printed creations they turn out—are like nothing ever seen in earth or sky or sea. But he is very proud of his work. His ambition at the moment is to "print the most remarkablest book in all the world." Somehow we have a conviction that it will be just that.

Our desert printshop has grown slowly. About like mescal and chollas grow—almost imperceptibly over a long period. Our first printing press was homemade. It was fashioned of wood and iron scraps and held together by homemade bolts.

For its design we studied, by the aid of a magnifying glass, the engraving of an ancient printing press which was on the postage stamp issued to commemorate the three hundredth anniversary of printing in America. All things considered our modified copy wasn't a bad press, even though it did function by means of a screw taken from a discarded piano stool, and

with a hand lever that once had been a wheel-cap wrench in the good old horse and buggy days.

To hold the type we made a chase out of wood, a remarkable contraption of our own invention that was more efficient than handsome. Our first experimental type was cut with a jackknife from scraps of old boards and old boxes found around the house. This and some illustrative wood-cuts, fashioned from similar discarded bits of wood, enabled us to really start printing. We didn't even have a hand-roller in the early days, but used a homemade leather buffer—quite in the approved style of Gutenberg—with which to ink our type and cuts.

In such manner we started in upon our career of "Printers and Binders." We graduated to linoleum-cut type and blocks after a while. And later still to what Rudyard calls some "really, truly" type. We got our first big thrill when we "published" our first book. This was a microscopic volume containing just three stanzas selected from an inspired narrative poem that had been written by a scientist friend in Colorado.

The original poem, a remarkable work of genius, dealing with the massacre of the cliff dwellers by the Navajo on Fifty Mile mountain, contained in its entirety 57 stanzas. But that number appalled us. Anyway our type volume wouldn't have begun to take care of it. So we compromised on three stanzas (all we had type for). After printing, not forgetting a neat little notice of the publication date and the fact that it was produced by "The Yaquitepec Press," we rummaged our odds-and-ends stores and bound the work in scraps of art paper and imitation leather.

It was strictly a "limited edition." For only two copies of the book ever were printed and only one ever bound. But of that one bound copy we were rather foolishly proud. The author was proud of it too—a fact which speaks volumes for the loyalty of friendship. He hadn't known, when he sent us the poem to read, that he was submitting it to a "publisher." So when the tiny little volume fell out of his mail one morning he was both astonished and delighted. He treasured that little book with inordinate pride, up to the day of his untimely death. And I have no doubt that somewhere, among the mass of brilliant scientific data which was left unfinished by his passing, that little volume still reposes in ordered, and listed, security.

So our desert printing has, in a fashion, already acquired a background and an honorable history. Equipment is a bit better now. The old wooden press has been superseded by a tiny modern one that works by a hand lever. And the type supply is a bit more adequate. A long, long way from where our dreams have set it in the future. But still, like the desert plants, it slowly grows. Already, in comparison, it has come quite a way. The sunlight falls through the window and across the type cases. And amidst the clicking of my machine, as I write these words, I can hear the low sound of Rider's voice as he whispers, half to himself, the words of the "copy" he is setting up.

. . . I had just written the sentence above when suddenly something happened. Nothing that you could see, nothing that you could feel. The sunlight still beat warmly through the window and beyond, to the north, the hard rocks of the barren ridge still glistened amidst their thin tufting of creosote bushes. There hadn't been a sound or a flicker out of ordinary. Everything was seemingly the same as it had been a dozen seconds before.

But it wasn't. *Something* had happened. A bubbling flood of thought had ceased as suddenly as though a valve had been closed. I could not write another word. I sat there baffled and puzzled, staring out into the sunshine. Thought was dead. And presently, in the hush, I became aware of another thing. Rider's whispering to himself and the click of the type as he assembled the letters together was growing slower. Soon the faint sounds ceased altogether. A bit sheepishly he laid aside the task and yawned. "Think I'll go out and see what Rudyard's doing," he

said lamely. He drifted out of the door. Work was at an end. I sat for another 20 minutes vainly trying to understand what had happened to myself. Then I too gave up. There was wood to chop, anyway. At least I could do that. I put away the typewriter.

That night there was a sudden freak storm. The temperature tumbled. Savage winds roared with bitter cold. All the next day we hugged around the stove. Then came night and peace. And this morning the sun came up bright and smiling as though nothing had happened. The whole desert world was back to normal. And thought had returned. Also unasked, Rider went back to his typesetting.

All of which signifies—what?

Well, it signifies a good deal. Not as an isolated instance—that way you might dismiss it without particular notice, the way we do so many things. But this, for us, was not an isolated instance. It was just one more link in a chain of similar "mysterious" happenings. Happenings which reveal startlingly the effect which environment and natural happenings exert upon man and other living creatures. There is nothing new about this effect upon thought, activity, health and life, which storms and atmospheric changes bring. Savages and wild creatures react to these influences instinctively, without question. But there is something new to the acceptance of these facts by "civilized" man who, while he realizes that he gets wet if it rains and gets hot if the sun is too warm, scoffs utterly at all the more subtle influences of what for the sake of simplicity we may call atmospheric changes.

Yet these subtle influences, which of course go much deeper than mere barometric indications and pressure areas, have a wide reach and an influence that hardly is guessed at. The nervous organism of a living thing, *if it is living a natural life close to nature*, is more sensitive than any instrument. Birds are sensitive to coming changes long before any signs are apparent to the eye or the duller senses. The animals of the forests and the deserts and the savage also have this inner prompting.

Almost everything has it that is in intimate contact with the earth. All except civilized man. Civilized man is so insulated in his houses, his paved cities, his shoes and his insulating armor of clothes that he is immune to natural vibrations. At best they reach him only feebly and imperfectly. Yet how many battles have been lost, how many nations have fallen, how many races and civilizations have wilted and withered because of some subtle, temporary or permanent change in the invisible environment.

But man does not give much thought to his invisible surroundings or to nature while he dwells in fat valleys or in cities. It is mostly in lean wildernesses, in the vast hush of deserts or in the savage wind-howled mountains of lands like Tibet, that his thoughts turn outward, away from himself and to a contemplation of the unguessed miracles of the Great Spirit that surround him on every hand. It was the wise men of the deserts of old Chaldea who learned to unravel the mysteries of shining night skies. It was the wise men of the deserts who saw also the Strange Star in the East—and followed it.

* * *

DEPTH

*Depth is such a graded thing,
With such a widening store,
That those who virtue smugly sing
Might cultivate some more.
There is no cork to wisdom's jar,
And no forbidding wall;
Each may attain the farthest star—
For Truth is free for all.*

—Tanya South

HERE AND THERE . . . on the Desert

ARIZONA

Car Inspection Stopped . . .

PHOENIX—Passenger cars entering Arizona no longer need stop for inspection at stations maintained on the state's borders, according to Pat H. Downs, supervisor of the motor carrier department. Such inspections are "unnecessary at this time," he said. The order does not affect inspection of trucks or the inspection work of the Arizona commission of agriculture and horticulture, it was pointed out.

Antelope Stocked . . .

FLAGSTAFF—Arizona soon may have antelope ranging across forest land near Willcox. Twenty-two animals from the Coconino national forest have been transported to a point 40 miles west of Willcox in southern Arizona by the division of federal aid of the Arizona game and fish commission. The district to which the antelope were transferred was surveyed by the game department and found suitable for restocking. More will be taken to the area in the near future.

Official Promoted . . .

WINDOW ROCK—Chester E. Faris, formerly assistant to John Collier, Indian affairs commissioner, has been appointed secretary of the Indian rights association. Mr. Faris was once second general superintendent of the Navajo reservation. He has seen 30 years service among Apache, Shoshone, Pima, northern Pueblo and Navajo, also serving at Santa Fe Indian school.

Boat Use Limited . . .

YUMA—Civilian boats or surface craft will not be permitted to pass under Colorado river bridges during daylight hours without being carefully inspected for explosives or other demolition equipment, according to regulations announced by Brig. Gen. Thoburn K. Brown of the western defense command. Boats will not be permitted to stop under bridges and none will be permitted to pass during night hours.

Carrots Leading Crop . . .

YUMA—Carrots have assumed a position of importance among Arizona's vegetable crops within the past few years, according to the U. S. agricultural marketing service. Carrot history in Arizona began in 1931, when 86,000 crates were shipped from 350 acres. Acreage planted in the 1943 spring shipment is located: Salt River valley, 2,250 acres; Yuma, 2,540; Eloy, 220; Rittenhouse, 100, and Pima county, 100.

Seeks Army Management . . .

PHOENIX—Henry Chee Dodge, hereditary tribal chief of the Navajo, accusing the government of mismanaging Indian affairs, urges that the problems of his people be removed from civilian bureaus and given to the army "where they will be understood." Bureaucratic agents who regulate life on the reservations have scant interest in his people's welfare and are "interested only in checks with the right numbers on them," according to Dodge. On the four occasions the army was sent to adjust Navajo problems, he asserted, they showed deep understanding.

* * *

Fire in one of the main hangars at Falcon field near Phoenix close to midnight February 21, caused an estimated \$20,000 damage. U. S. army air force property bore the brunt of the damage.

* * *

John William (Uncle Billy) Spear, editor of the Arizona Republic, Phoenix, and dean of Arizona newspapermen, died February 7. He was 86 years old.

CALIFORNIA

Learns First Hand . . .

TRONA—Albert Weber, 16, was lost two days in the desert without food or water when he set out on a hike toward Valley Wells and became confused by the similarity of the canyons in the Argus range. Toward noon of the second day he sighted a miner's cottage and was given a ride to Inyokern where he hitch-hiked back here.

A WESTERN THRILL

"Courage," a remarkable oil painting 20x60 feet, the Covered Wagon Train crossing the desert in '68. Over a year in painting. On display (free) at Knott's Berry Place where the Boysenberry was introduced to the world and famous for fried chicken dinners with luscious Boysenberry pie.

You'll want (1) A 4-color picture of this huge painting suitable for framing. (2) A 36-page handsomely illustrated souvenir, pictures and original drawings, of Ghost Town Village and story of this roadside stand which grew to a \$600,000 annual business. (3) Two years subscription (12 numbers) to our illustrated bi-monthly magazine of the West. True tales of the days of gold, achievements of westerners today and courageous thoughts for days to come. Mention this paper and enclose one dollar for all three and get authentic western facts. Postpaid. GHOST TOWN NEWS, BUENA PARK, CALIF.

HEARD OVER KXO



"LISTEN TO IT FIZZ" PROGRAM STARTS 10th YEAR ON AIR

Celebrating its 9th consecutive year in March, is the Alka-Seltzer Newspaper of the Air program, heard at 10 a.m. and 9:00 p.m. each day over the Mutual Don Lee radio stations.

Above we see Fred Shields, commercial announcer, and Glen Hardy, news reporter, getting ready for the "listen to it fizz" part of their 9-year-old show.

KXO, THE VOICE OF IMPERIAL VALLEY
1490 KC — The Top of Your Dial

War Casualty . . .

BANNING—A recent war "casualty" is the Herald newspaper which will be merged with the Banning Record. The two papers will be published together each Thursday for the duration after which the Herald will be revived.

The Desert TRADING POST

Classified advertising in this section costs five cents a word, \$1.00 minimum per issue—actually about 1 1/3 cents per thousand readers.

MISCELLANEOUS

FOR SALE—12 beautiful perfect prehistoric Indian arrowheads \$1; 10 tiny perfect translucent chalcedony bird arrowheads, \$1; 10 perfect arrowheads from 10 different states, \$1; perfect stone tomahawk, \$1; 4 perfect spearheads, \$1; 5 stone net sinkers, \$1; 10 perfect stemmed fish scalers, \$1; 7 stone line sinkers, \$1; 4 perfect agate bird arrows, \$1; 5 perfect flint drills, \$1; 7 perfect flint awls, \$1; 10 beautiful round head stunning arrowheads, \$1; 4 fine perfect saw edged arrowheads, \$1; 4 fine perfect flying bird arrowheads, \$1; 4 fine perfect drill-pointed arrowheads, \$1; 4 fine perfect queer shaped arrowheads, \$1; 4 rare perfect double notched above a barbed stem base arrowheads, \$1; 5 perfect double notched above a stemmed base arrowheads, \$1; 12 small perfect knife blades of flint, \$1; rare shaped ceremonial flint, \$1; 3 flint chisels, \$1; 7 quartz crystals from graves, \$1; 10 arrowheads of ten different materials including petrified wood, \$1. All of the above 23 offers for \$20. Locations given on all. 100 good grade assorted arrowheads, \$3.00 prepaid. 100 all perfect translucent chalcedony arrowheads in pinkish, red, creamy white, etc., at \$10.00. 100 very fine mixed arrowheads all perfect showy colors and including many rare shapes and types such as drill pointed, double notched, saw edged, queer shapes, etc., location and name of types given, \$25.00 prepaid. List of thousands of other items free. Caddo Trading Post, Glenwood, Arkansas.

Assortment of 8 polished slabs all different or 8 cabochons all different \$1.90. String of rare opalized Indian grave beads 48 inches long with data \$1.95. Absolute satisfaction guaranteed. P. Smith, Sr., 2003 59th St., Sacramento, Calif.

LIVESTOCK

KARAKULS producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further information write Addis Kelley, 4637 E. 52 Place, Maywood, California.

Karakul Sheep from our Breeding Ranch are especially bred to thrive on the natural feed of the Desert. For information write James Yoakam, Leading Breeder, 1128 No. Hill Ave., Pasadena, California.

REAL ESTATE

For Imperial Valley Farms —
W. E. HANCOCK
"The Farm Land Man"
Since 1914
EL CENTRO — — — CALIFORNIA

Mullet Fishing . . .

NILAND—Mullet fishing around the bayous of the Salton sea is developing into a new and profitable desert industry with daily shipments being sent to coast buyers. Markets of Imperial Valley are featuring the fish which ranges in size from 18 inches to two feet and retails around 15 cents a pound. Fishermen's nets are used to catch the fish as they feed on vegetation and no well-baited hook will lure them to strike. Fishing outfits operating along the edges of the sea must obtain special permits from the California fish and game commission to use the nets. Fishermen are paid about \$200 a ton wholesale.

Cantaloupe Production . . .

BLYTHE—Palo Verde valley will produce about 600 acres of cantaloupes this season an early survey shows. The Eaton Fruit company will plant some 200 acres; California Produce company, a newcomer to the valley, has leased the 200-acre Jim Rife ranch and probably will take other properties; and the California Lettuce Growers and the Comer Produce company also plan melon deals.

O.P.A. Checks Traffic . . .

PALM SPRINGS — Hundreds of Southern California residents who spent the weekend of February 14 in this desert spa were checked by O.P.A. officials at a station set up to reveal misuse of gasoline supplies. Owners of automobiles carrying "B" and "C" stickers and who could not prove that they were either residents of the area or were there on acceptable business were reported to ration boards. Even "A" card holders were warned of the need for conserving tires.

Packer Claimed . . .

EL CENTRO—Fred R. Bright, Imperial Valley's most prominent vegetable grower and packer, died here February 16 of a heart ailment. Mr. Bright first came to the valley in 1918 when he served as salesman for Will Fawcett, and then in 1923 went into business for himself. His produce brands are known throughout the country.

Film Picture . . .

BRAWLEY—Major Hollywood studios may utilize the scenery near here as a permanent "set," following interest aroused by film sent back to Hollywood from the Columbia picture "Somewhere in Sahara" now being made here. New units will take over facilities and accommodations left by the present company after Humphrey Bogart and the rest of the cast and crew return to Hollywood.

NEVADA

Ration Puzzle . . .

CARSON CITY—Western Nevada rationing boards need a geographer or one of those Philadelphia lawyers to figure out this mixup. Residents of Glenbrook and those living along the east side of Lake Tahoe deal with the board at Minden. Residents of Dayton and vicinity go to Yerington. Residents to within four miles of Carson City go to Reno. Virginia City residents have their own board, and residents of eastern Eldorado county in California on the west and south sides of Lake Tahoe go clear around the lake to Carson City.

Seeks Japanese . . .

RENO—Governor E. P. Carville has signed an application to the war relocation authority which would permit importation of 100 Japanese evacuees into Moapa valley to aid in planting tomato crops. However, the governor said that under the circumstances, Nevada with only one paid state policeman cannot afford to assume full supervision and protection of the evacuees. The war relocation authority demands such a pledge.

Warmer and Drier . . .

LAS VEGAS—Nevada's 1942 weather was not only one degree warmer on the average but much drier than normal. As compared with the preceding wet year of 1941, it was slightly warmer, but 6.11 inches less average precipitation. Temperature departures were irregular. The largest monthly deficiency in temperature came in February.

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Its news about Rodeos and Roundups is the most authoritative of any published in America. Rodeo Association bulletin and Cowboy's Turtle Association news are published monthly.

Those who enjoy poetry of the Old West will revel in the abundance of truly typical poetry that appears in each issue of Hoofs and Horns. You'll like Hoofs and Horns!

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P. O. Box 790 Tucson, Arizona

The University of Nevada has asked \$50,000 less for operations during 1943 and 1944 than was used in the preceding two-year period, according to Governor E. P. Carville. The university has asked \$779,500 for the next two years.

• • • NEW MEXICO

Apache Is Prisoner . . .

MESCALERO — Homer Yahnozha, former chief of the Mescalero Apache tribal council, is a prisoner of the Japanese in the Philippines, the war department has advised. Yahnozha and Bruce Klinkole, another Apache, also a prisoner, were members of the 200th coast artillery.

Indian Wars Exempt . . .

ALBUQUERQUE—Indian handicraft articles are exempt from price controls, according to an announcement made by the office of price administration. The action met with gratification among Indian traders who had declared, "not only is a price ceiling on these products unfair to handcrafters who may depend upon the income from a bare subsistence living, but it presents a problem of enforcement incapable of solution, due to the home and hand work of these native industries."

Tourist Bureau . . .

SANTA FE—New Mexico state taxpayers association has approved legislative proposal to abandon the state planning board and to suspend the tourist bureau. The latter has required from \$25,000 to \$75,000 annually, and while it has been of great value to the state, legislators believe that it should be suspended in line with war economy moves. Abolition of the bureau for the duration of gasoline rationing was proposed.

Forest Employees Cut . . .

ALBUQUERQUE—The armed services have taken 46 members of New Mexico and Arizona forest service ranks with three more now awaiting call, making the job of forest management more difficult than ever, according to federal officials. Twenty-three members of the organization have been transferred to guayule projects, eight have gone to war mapping and four to other agencies since Pearl Harbor. There have been no replacements or new appointments.

Aged Indian Dies . . .

LAGUNA — Levantomio Siow, believed to be the oldest inhabitant of Laguna pueblo died February 8. He was said to be more than 115 years old. He could vividly recall battles of his pueblo against marauding Navajo and Apaches nearly a century ago, and always referred to the coming of the railroad as a recent event.

Bureau Condemned . . .

SANDIA PUEBLO—Members of the All-Pueblo Indian council adopted a resolution condemning practices of the Indian bureau for allegedly "creating trouble within various Indian pueblos." The bureau "created trouble by pitting one Indian against another or one faction against another faction to cause disunity at a time when unity is needed," it said. In addition the resolution stated that the Indian bureau by "tacit approval" had spurred action of violence within certain factions, "and at times even helped along actively by paid members of the Indian bureau to oppose and tear down pueblo institutions known to us traditionally without giving us better forms by which to live."

• • • UTAH

Racing Car is Gift . . .

SALT LAKE CITY—Mayor Ab Jenkins has donated to the L.D.S. church his \$41,000 "Mormon Meteor," the racing car which holds more world's records than any other automobile. The large orange-colored car will be housed in a special glass showcase in the state capitol building. He said he made an agreement whereby the racing car may be borrowed by him for further runs on the salt flats, "if the war doesn't last too long."

Deseret Editor Dies . . .

SALT LAKE CITY—James A. Langton, 81, editor and editorial writer of the Deseret News and former member of the Utah state board of education, died in February. He was a high priest in the L.D.S. church at the time of his death. A resolution of condolence was adopted by the state senate and sent to his son-in-law, Senate President Grant Macfarlane and his family.

Indian Accuses Whites . . .

VERNAL—A nearly forgotten struggle between the Indian and the white man over the lands which sustain their herds was revived when 70-year-old Powinee, Uintah headman, speaking to a senate subcommittee through an interpreter, charged the white man with having a "crooked tongue."

"Every seven years the Indian receives promises of more lands for his flocks and herds," Powinee said. The aged Indian addressed the hearing conducted to study need for proposed legislation to increase the size of the Uintah reservation near here by approximately 1,000,000 acres, after Adair Tyzack, Vernal sheepman, has testified that setting the lands aside for the exclusive use of the Indian would "make tramps" of white sheepmen of the area and rob the county of assessed valuations in excess of \$100,000. Mr. Tyzack said county sheep outfits now are running 23,400 head of sheep in the area.

Naval Depot Nears Completion . . .

CLEARFIELD—Utah's naval supply depot is nearly 85 percent completed following construction of railroad lines, utilities and the large network of roads leading to the depot warehouses. Run-off and drainage of underground and surface water has been a problem which is being met by the laying of a five-foot tile drainage pipe from the naval depot to Great Salt Lake.

29 PALMS INN

THE HOTEL AT THE
PALMS

* * * * *

FIREPLACE ADOBES

* * * * *

FOOD TO REMEMBER

* * * * *

SADDLE HORSES

BADMINTON

* * * * *

AMERICAN PLAN

Single \$6.00 up

Double \$10.25 up

Gateway to Joshua Tree National Monument
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Reservations — write 29 Palms Inn at
Twenty-nine Palms, Calif., or call any Travel
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These rugged woven sandals that have brought cool comfort to so many thousands of American feet in recent years are still available for immediate delivery at no increase in price. Each pair is an original creation, beautifully handcrafted in natural beige leather that ages to a deep tan (also in white, plain weave). Send foot outline, mention shoe size. We guarantee a fit in any size for men or women.



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The OLD MEXICO SHOP
D SANTA FE NEW MEXICO

BOOKS OF YESTERDAY AND TODAY

a monthly review of the best literature of the desert Southwest, past and present.

"TANG OF TEXAS" IN PIONEER TALES

"Everything is new here and you have to fight like hell for it. If it isn't the cloud-bursts, it's fire, or it's wind or plain cussedness, or all of them put together."

So Brazos, the 22-year-old cattleman, sums up Texas of the '80's. With heroic courage he met the tragedies and the continual struggles with encroaching fence-building farmers, that characterized that second stage of Texas history.

Even his life with Mary, his wife, who shared his eagerness to keep what was rightfully theirs, was jarred by the impact of the experiences that were inevitably the experiences of many in those stirring days. Struggling against the elements, struggling against human foes—these were the forces upon which Texas eventually built a firm and lasting foundation.

Ross McLaury Taylor's *THE SADDLE AND THE PLOW* is rich in the tang of Texas dialogue. Packed with action, the story maintains a poetic quality throughout, despite its vigorous style.

Bobbs Merrill Co., New York. 398 pp. \$2.50.

—Marie Lomas

NEW MEXICO SETTING FOR PROBLEM NOVEL

In *THE COMMON HEART* Paul Horgan, Southwestern novelist, has written a mature and full-bodied story; scenic, as are all of his tales, well-told, and replete with likable, believable characters.

All of Mr. Horgan's books have been

rich in color, steeped in Southwestern tradition, and his scene always on the varied and scintillating facets of New Mexico. This, his first full length novel in five years, is no exception.

The principal character is Peter Rush, a physician who deeply loves his native land and delves into its ancient lore and legends. His wife, a woman who has lost touch with her surroundings, is reluctant to face life squarely despite the fact that she is capable of great fortitude and suffering.

It is a novel of human problems and the people who meet them in various ways. But through all the characters, both strong and weak, are seen the universal qualities which reaffirm the dignity of man.

Harper and Brothers, New York City, 1942. 398 pp. \$2.50.

—Harry Smith

LATIN COOKERY FOR AMERICAN KITCHENS

An intriguing collection of unusual and authentic Spanish dishes is presented in *OLLA PODRIDA*, from the press of the Caxton Printers, Caldwell, Idaho. This publication is suitably named, for "olla" means the old earthen clay pot, and "podrida" is continually full of good things—rich and spicy.

The author, Elinor Burt, a widely experienced dietitian and home economics instructor, has collected recipes from South and Central American countries to present a book of recipes adaptable to the resources of the average American kitchen.

The recipes are divided into four sections: Spanish, Mexican, Latin-American and Creole cookery, the latter a blend of French and Spanish tastes. Each chapter presents a selection of guest menus and a brief introduction to the true Latin cuisine, enabling the host or hostess to plan entire meals with an authentic, foreign influence.

—Evonne Henderson

DESERT POEMS IN QUATRAIN FORM

Those who have read *THE SHADOW OF THE ARROW*, an earlier volume by Dr. Margaret Long in which she writes of Death Valley, will welcome her new work, a booklet of poems, *ENCHANTED DESERT*. All who love the desert will find her poems lively, at times reflective and always a true expression of the wastelands.

Into the quatrain form used by Omar in writing of the similar terrain of Persia, she has recorded her feeling for the desert country, the sagebrush, mirages and ghost towns. 42 pp.

CHALFANT RETELLS MINING DAY TALES

In the days when mining was the Big Business of the border country between California and Nevada, the old sour-doughs and prospectors and law dispensers interpreted justice in their own inimitable way—which was always rough, and often strictly unique. Some of those old stories have been told. Some have been laid quietly away in newspaper files awaiting resurrection.

Such a one is *TALES OF THE PIONEERS* by W. A. Chalfant, dean of California editors. Composed of 18 separate chapters, the book chronicles some of the untold stories of those days. Most of them are told with quiet humor; in some the humor is not so quiet; in all of them the stories are authentic.

There is a nice slice of Mark Twain's humor in "Mile High Mono Lake." The adventures of Artemus Ward in Nevada is another chuckler. And there is the story of the not-really-dead Chinaman Aw Shucks who came down a zig-zag trail in a coffin on a donkey's back.

Excerpts from a Nevada newspaper give sidelights on life in an early mining town: "Some people do not hesitate to fire a pistol or gun at any time, day or night, in this city, a practice which we regard as reprehensible." Some time after this reproach appeared, the editor optimistically wrote, "There has not been a homicide or a serious altercation for nearly two months, and we begin to think that a healthier state of morals pervades the community."

There are stories of politics, mining, ghost towns and familiar characters like Shorty Harris, Oliver Roberts and John Searles.

Stanford University Press, December, 1942. \$3.00.

—Mora M. Brown

NAVAJO BOY'S LIFE TOLD IN PRIZE BOOK

WATERLESS MOUNTAIN is the story of a present day Navajo Indian boy and his eight years of training in deep understanding of the ancient religion of his race and in practical knowledge of the world about him. The land of colorful canyons, painted deserts and legendary mountains in northern Arizona furnish the setting.

Laura Adams Armer's story of the Navajo Indian tribe is rich in description of plant and animal life and prehistoric cliff dwellings, interwoven with the mystic legends of the Navajo.

WATERLESS MOUNTAIN was awarded the Newberry Medal as the most distinguished contribution to American literature for children in 1931, but it is a book for readers of any age who are interested in the Indians and their homeland. Longman's Green and company, New York City. Illus. \$2.50.

—Helen Smith

Sun and Saddle Leather

By BADGER CLARK

It's been called "the best Western verse ever printed," and by popular demand the twelfth edition has just come off the press. Here are the collected poems of the Southwest's own cowboy-poet—poems like "The Glory Trail" and "Ridin,'" that have overleaped the printed page to become part of the great body of American folk-song.

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—W. T. HORNADAY.

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GEMS AND MINERALS

ARTHUR L. EATON, Editor

GRAND JUNCTION CLUB LEARNS OF MAGNESIUM

Lowell Heinly of Mesa college faculty, gave an illustrated talk on magnesium February 2 for the Grand Junction mineralogical society. Interest in this subject was especially high because of the mining activity near Thompsons, Utah, which is familiar territory to all the members.

A lecture on botany as the foundation for the study of paleobotany was given at the February 15 meeting by Jack Herr, head of the science department of Grand Junction high school. Mr. Herr showed how the variety of petrified tree or fern can be distinguished if one understands the ducts, sieve tube and ring system of various species.

PHOENIX CLUB INVITES PUBLIC TO LECTURES

Mineralogical Society of Arizona offers a free lecture program to the public every second and fourth Thursday of the month at the Arizona Museum, West Van Buren street at 10th avenue, Phoenix.

Of special interest are the next two topics: Chemical Warfare in World War II, by Dr. G. M. Bateman, March 25; Denizens of the Desert, by Dr. H. L. Stahnke, April 28.

February 4 speaker for the club was William B. Pitts, San Francisco, who described his methods of preparing thin sections of agate for showing with a projector.

BRAZILIAN DIAMOND IN FAMOUS INDIAN NECKLACE

The collection of gems owned by the Gaekwar of Baroda, in India, is believed to be worth over ten million dollars. Among the items of this famous collection is a necklace containing one of the world's most famous diamonds, the great "Star of the South," or "Estrella do Sul," worth more than \$400,000 dollars.

This stone weighed 255 carats in the rough, when it was discovered in the Bagagem diamond fields of central Brazil. In shape it was an irregular rhomboid dodecahedron of very fine quality. Cutting reduced it to an almost circular stone about one and one-half inches in diameter, weighing over 125 carats, and displaying the beautiful, eight pointed star which gives it its name.

PACIFIC MINERAL CLUB ELECTS NEW OFFICERS

Pacific mineral society installed 1943 officers February 12: N. L. Martin, president; Wm. C. Oke, first vice-president; C. C. Brunk, second vice-president; Margaret Cotton, secretary-treasurer; H. E. Eales, field trip chairman; R. L. Cotton, R. J. H. Mittwer, directors.

Dr. Ian Campbell, assistant professor of petrology at Cal Tech, was speaker. He told of a trip through Grand Canyon via the Colorado river, illustrating his talk with motion pictures and colored slides.

Harold E. Eales was in charge of the display case for February.

LAST OF KNOWN ELEMENTS ISOLATED BY SCIENTISTS

Recently announcement was made of the isolation of element 85, last of the 92 known elements, at Berne, Switzerland. Dr. Alice Leigh-Smith (English) a pupil of the late Madame Curie, and Dr. Walter Minder (Swiss), director of the radium institute, announced that they had isolated the fifth of the famous halogen family, eka-iodine, which can now be added to the already known list of that family, fluorine, chlorine, bromine, and iodine. The new element has been named anglohelvetium, after the native countries of the two scientists.

FREAK QUARTZ CRYSTAL KNOWN AS QUARTZOID

Edward Salisbury Dana, son of the world famous scientist and mineralogist, James D. Dana, writing more than 50 years ago, describes the quartzoid, one of the most interesting "freak" forms of the quartz crystal. Common quartz crystals take the form of hexagonal prisms, terminated at each end by a six sided pyramid.

In the quartzoid, the prism is entirely or almost entirely missing, leaving only a crystal formed of the two hexagonal pyramids. Sometimes, this is varied by a bevel between the two pyramids. This plane is frequently narrow enough to be almost invisible to the naked eye, but its presence adds, or rather replaces, the six sides necessary to the completion of the prism.

HALITE

Those who regard salt as "common salt," and let the matter go at that, have missed the significance of one of the most interesting of minerals. A very striking collection could be made of nothing but salt or halite specimens.

In its crystal formations, salt is very sensitive to location and conditions. Salt Lake salt and ocean salt often form large and beautiful cubes, sometimes as large as four inches in diameter; Salton sea crystals are clusters of tiny, sparkling cubes; basket crystals are common in certain localities; and some of the saline lakes even produce octahedrons.

Color in salt is another little known item of interest. Salt itself, when pure, is snow white or colorless, but slight impurities often produce striking color effects. Many colored algae from the lake regions of eastern California, when caught in the rapidly forming salt crystals make pink, red, green or lavender groups, or even clusters of all those colors at once. In the Midwest, impurities of iodine or soluble iron salts produce colorful masses of all shades of yellow, orange or brown. Many of these types are brilliantly fluorescent.

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Cogitations . . .

Of a Rockhound

By LOUISE EATON

The desert is just like peepul, only opposite, sort uv. You can casually know sum folks fer years 'n think they's pretty good fellas. Then may come a time when you has to be associated with 'em 24 hours out uv 24. Soon they gets on your nerves ('n vicie-versy) 'n you mutually discovers that you don't like each other so well.

Now the desert shows its unpleasant traits right at th' start. If you don't spend intimate hours with it, you'll see only th' displeasing qualities—heat, dust 'n stickers on everything. It takes close association to learn th' beauty 'n peace, th' serenity 'n soul-healing power uv th' desert.

But be sure you has plenty uv water.

"No great loss without a silver lining," says sumone. No gas, no tires—but on th' other hand there has been no rain so there won't be any wild flowers to waste their fragrance 'n beauty on th' desert air. Consequently you don't hafta regret that you can't get to th' desert when th' flowers bloom.

Rockhounds form sort uv a caste. Wherever they travels all over th' country they just nacherally gravitates into gem 'n mineral clubs in that vicinity, which same welcomes 'em like well known friends.

MINERAL BOOKS . . .

There's no more fascinating a hobby than collecting minerals. For your education so that you can thoroughly enjoy this study. Desert Magazine has a complete list of books, a few of which are given below.

THE ART OF GEM CUTTING. complete second edition, Fred S. Young, gemmologist. Contains information on cabochon cutting, facet cutting, methods to test stones, the value of gem stones and useful lapidary notes. Index. 112 pages. . . . \$2.00

GETTING ACQUAINTED WITH MINERALS. G. L. English. Fine introduction to mineralogy. 258 illus., 324 pp \$2.50

HANDBOOK FOR THE AMATEUR LAPIDARY. J. H. Howard. One of the best guides for the beginner, 140 pages. Good illustration \$2.00

QUARTZ FAMILY MINERALS. Dake, etc. New and authoritative handbook for the mineral collector. Illustrated. 304 pp \$2.50

DESCRIPTIVE LIST of the new minerals 1892 to 1938, G. L. English. For advanced collectors. 258 pp \$3.00

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THE DESERT MAGAZINE

El Centro, California

NEW PENNIES LOOK LIKE QUARTER-DIME CROSS

Early March saw limited numbers of the new zinc coated steel pennies released to circulation by the treasury department. They look like a cross between a nickel and a dime. First samples were handed to treasury officials by the assistant director of the mint, Leland Howard. On the following day, lots of 50 or fewer were placed on sale from the treasury's cash room. Coin collectors and curiosity seekers obtained most of the new coins on the first day. Mint director Nellie Tayloe Ross said that the new pennies will save the government at least 4,600 tons of copper during the current year.

WARTIME ROCKHOUND

By LOUISE EATON

Before the sunrise paints the skies
Or I burn the breakfast toast
I plan to slice a rock—but No—
I'm due at the Listening Post.

Long afternoons should offer time
For jasper, jade or geode
But NO! Temptation let me be!
The garden must be hoed.

As day draws toward a sultry close
I long to polish rocks.
But conscience says: No, no, Louise.
Start darning Arthur's sox.

And if a free day seems in sight
To indulge in joy untold
The Red Cross phones and says to me,
"More bandages to fold."

So polishing must wait a while
For emery wheel and lap.
We have a bigger job to do:
To polish off the Jap.

ANSWERS TO TRUE OR FALSE

Questions on page 12.

- 1—False. California was annexed to the Union in 1846, three years before the Jayhawkers.
- 2—True.
- 3—False. Chrysocolla is a copper ore.
- 4—True. Decreed a national monument in 1923, they became a national park in 1930.
- 5—True. Arizona was once part of New Mexico territory.
- 6—True.
- 7—False. Blue Forest is a section of Petrified Forest, east of Flagstaff.
- 8—True. 9—True.
- 10—False. A government settlement at mouth of Canyon de Chelly.
- 11—False. It is the largest ruin in Mesa Verde national park.
- 12—True.
- 13—False. Ice Cave is in a volcanic formation.
- 14—True. 15—True. 16—True.
- 17—False. It is covered by waters of Lake Mead.
- 18—False. Discovered by sheriff's posse in pursuit of bandits.
- 19—True.
- 20—False. Bradshaw road ran from San Bernardino to La Paz; Butterfield road crossed the Colorado river at Yuma.



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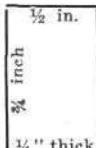
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Red Jasper	Brazilian Agate
Black Obsidian	Belgian Chert
Multi-colored Petrified Wood	Eden Valley Wood
Rouge Blanca	Moss Opal
Myrickite	Green-red Moss Agate
Chrysocolla	Nevada Wonder Stone
Black Wood	Brecciated Jasper
Jasp-agate	Orbicular Jasper
Palm Wood	Utah Jade
Moss Agate	Vesuvianite
Cinnabar Opalite	Double-flow Obsidian

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WANTED—Used late model mineral or other reliable lamp. State condition, price and make. Taylor Martin, Box 295, Pecos, Texas.

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\$2.50 brings you prepaid, six rare and beautiful crystallized Arizona minerals. Vanadinite, Dioptase, Wulfenite, Willemite, Chrysocolla, Azurite. Specimens 1½x2 or larger. Wiener Mineral Co., Box 509, Tucson, Arizona.

AGATES, Jaspers, Opalized and Agatized woods. Thunder eggs, polka dot and other specimens. Three pound assortment \$1.50 postpaid. Glass floats, price list on request. Jay Ransom, 1753 Mentone Ave., Pasadena, Calif.

ZIRCONS—OPALS—CAMEOS—3 Genuine diamond cut Zircons (total 2½ carat) \$2.75. Twelve Genuine Opals \$1.50. Twelve Genuine Cameos \$2.50. B. Lowe, Box 311, St. Louis, Mo.

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AMONG THE ROCK HUNTERS

San Diego mineralogical society continues to increase in membership in spite of dimouts and war difficulties. Officers for the current year are: Col. A. E. Sherman, president; C. A. Scott, vice-president; Hazel M. Wedgewood, secretary; B. B. Hoff, treasurer. Visits to collections in homes of members Col. Sherman, Jack Martin, C. A. Scott and Harold Baker have proved stimulating. Practical hints on cutting and polishing were given. The club has been studying the geology and geography of San Diego county, with special emphasis on gem and mineral locations.

Ore bodies in the Mt. Hope lead-zinc mine, 32 miles northwest of Eureka, Nevada, are said to contain commercial amounts of cadmium. Cadmium is a war mineral quoted at 90 cents per pound. Early operation of Mt. Hope is planned by Universal Exploration company, a subsidiary of United States Steel corporation.

Sequoia mineral society plans to make this a social year because field trips are out for the duration. The club's service flag, made by Pearl Elter, has seven stars.

Imperial Valley gem and mineral society tried hard to die, but couldn't. Over 90 percent of its members are in the armed forces or in defense work. The remaining few have decided to meet once a month. Dues have been dispensed with, but federation membership will be continued. A box of grabs from Sequoia club was almost as good as a field trip January 6. February meeting was a potluck supper at the home of Arthur L. Eaton.

Searles Lake gem and mineral society cleared \$680 at their second annual Forty-niner benefit party held at the Trona club, January 30. The money was given to seven war relief and welfare organizations: American Red Cross, March of Dimes, Salvation Army, U.S.O., China war relief, Army and Navy relief.

Claire Franklin of Trona unified school faculty talked on insects for food at the February 17 meeting of Searles Lake club. Work was begun on restoration of the desert oasis at Indian Joe's, site of John Searles' home. The men repaired trail while the women prepared lunch.

Approximately 30,000 tons of baurhyte have been shipped this year to a plant in Modesto from the Spanish property near Washington, California. The Spanish was formerly a noted gold producer.

Larry Dawson, secretary Escondido Desert Club, reports that the club has given a silver ring set with a native stone to each of its nine members who have joined the armed forces. The present project of the group is collecting hunting knives to send to service men. Their slogan is "Give your knife to save a life."

W. L. Cozzens of Fairchild aerial surveys, Los Angeles, was guest speaker at February 4 meeting of Orange Belt mineralogical society. He showed slides taken in United States and Central America depicting earthquake faults and various geological formations, and explained how contour maps are made from aerial photographs. Dr. Clark donated specimens for door prizes.

Officers of Boston mineral club are: Milford Wall, president; Rudolph Bartsch, vice-president; M. Gertrude Peet, secretary; Chester Lovejoy, treasurer. The society met February 2 in the New England museum of natural history. Topic for discussion was minerals of Nova Scotia and eastern Canada; speakers Milford Wall and George A. Wilson showed koda-chrome movies of the region and told of rock collecting there. Auction of specimens helped the exchequer.

"Liquid sunshine, hub deep in the streets," says B. Schlagenhauff in Long Beach mineral news, "did not keep 12 hardy watersprites from attending the lapidary meeting at E. T. Carleton's home in Bellflower." Carletons demonstrated an especially efficient horizontal lap wheel.

Mr. Reddick lectured on snakes at February 12 meeting of Long Beach mineralogical society. Among new members of this progressive society are Mr. and Mrs. Howard L. Soper, former Imperial Valley gem and mineral club members.

Dr. Palache addressed Boston mineral club January 5 on strategic minerals in the United States and what progress has been made in finding their locations. Dr. Hurlbut gave some facts on the gigantic job of cutting millions of radio crystals needed by our armed forces.

Radium was the subject for March 2 meeting of New Jersey mineralogical society, Plainfield. Dr. G. C. Ridland of Johns Manville company, spoke on the methods of prospecting for radium in the Far North, and demonstrated the Geiger Counter, an apparatus which he used for radium prospecting. In addition the Canadian Radium corporation provided a motion picture of the mining process.

Speaker for East Bay mineral society's March 4 meeting was George H. Needham, micro-chemist, consultant microscopist and past president of New York microscopic society. He told members how to prepare micromounts and had many specimens for demonstration under the microscope.

W. Scott Lewis suggests in his February bulletin that children be taught by suggestion not compulsion to observe the wonders and beauties of nature. Then they will not grow up blind to simple joys.

A display of strategic minerals is featured in the Trona branch county library.

The Brazilian government, in 1895, reported the finding in the state of Bahia, of an amorphous diamond, of the grade known as bort or boart, which weighed 3,078 carats in the rough, just 28 carats short of the 3,106 carat weight of the famous Cullinan diamond of South Africa, the "largest diamond in the world." The Brazilian stone was not of the finest gem quality, but at moderate prices would bring about \$250,000.

A farm worker, while plowing on a small ranch west of Holtville, California, plowed up several small clusters of glistening blue, purple and green crystals. Not knowing what they were, he carried them immediately to town for identification. They turned out to be carborundum crystals of the type manufactured in New York state for the making of carborundum stones and wheels. No one seems to know just how they got to the location mentioned.



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Includes specimens of copper ore, jasper, blue calcite, tourmaline, onyx, silver ore, iron pyrite, muscovite, opal, vesuvianite, marcasite, actinolite, flint, turquoise and gold ore and small hand lens \$1.00

Desert Crafts Shop

El Centro, California

AMATEUR GEM CUTTER

This page of Desert Magazine is for those who have, or aspire to have, their own gem cutting and polishing equipment. Lelande Quick, who conducts this department, is former president of the Los Angeles Lapidary society. He will be glad to answer questions in connections with your lapidary work. Queries should be addressed to Desert Magazine, El Centro, California.

By LELANDE QUICK

In the February Desert Magazine I promised to tell of a new device developed by Herbert L. Monlux with assistance from J. Howard McCornack, both of Los Angeles. This device enables the easy drilling of hearts, pendants, etc., with a minimum loss of stones if good material is being used. A diagram of the unit appears at right and I'll quote Mr. Monlux' explanation of it:

"Drilling stones is no longer a big headache for me; it's lots of fun. Anyone can obtain a small drill press 13 inches or more high and build an almost fool-proof automatic machine. The secret of successful drilling without breaking hearts (no pun intended) is the introduction of a lifting motion. Proper speeds are essential also as too much speed will throw the grit away from the drill. The drill should be lifted out of the hole about once a second to allow fresh abrasive to be drawn under it. It should turn about 600 r.p.m. and be run with 1/20th h.p. motor. This speed is obtained by pulleys on a countershaft mounted in line with the drill.

"A lifting cam is mounted on a wheel running horizontally under the lifting lever. This wheel turns on a hollow hub bearing and does not touch the drill shaft because the shaft would not lift and fall otherwise due to the binding pressure of the roller and cam lift on the side of the wheel. The lift of the cam should be about 35 degrees and the fall about 10 degrees. This slower fall is to eliminate the pounding effect of the falling drill. A small roller is fastened to a side arm and rides the edge of the wheel which is lifted by the cam as it passes under the roller. The weight of the shaft is enough to drill the stone but a light spring can be used so that some pressure and speed can be gained. The platform for mounting the upper wheel-lever and cam roller is made of hard wood.

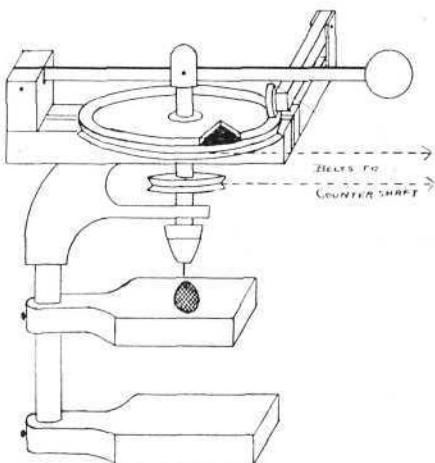
"The drill is a small tube, which is faster than a solid drill. The center of a solid drill has no cutting power; it merely rotates on the grit. The best tube is self-made. Cut strips out of a tin can. Cut them an eighth of an inch wide, point the ends, pull them through a jeweler's wire drawing plate, drawing through smaller holes until they are passed through the size 20 hole. If you want to use these tubes in the chuck that comes with the drill press you should force pins in the holes where the chuck clamps to keep them from collapsing. A better way is to bore a hole in a quarter inch brass rod and force a short piece of the tube into the hole, replacing it for each hole drilled as the grit and core will turn the tube into a solid rod and slow the efficiency of the tube.

"Drill with 220 carborundum with 20 gravity engine oil added. Mount the stone to be drilled on a thin board with sealing wax. Make a small well of wax around the place to be drilled to keep the grit there. Do not hurry as that may cause the drill to break through."

This is an improvement over Mr. Monlux' drill illustrated in William T. Baxter's excellent book "Jewelry Gem Cutting and Metalcraft." Mr. Baxter recently informed me that he has made some other changes for efficiency. He has added another cam and is using a roller skate wheel on the rocker arm to reduce friction and a window shade roller spring to supply tension on the drill.

It was a matter of great regret that last month's department contained a "slip that passed in the type." Of course the word should

have been "flower stone" in the sentence "I think flowers are interesting to a degree but I fail to see much beauty in them." The man doesn't live who loves and appreciates flowers more than myself.



Once again a great event for gem lovers is in the offing. The third annual exhibition of gems cut by members of the Los Angeles Lapidary society is scheduled for May 15 and 16 with complete details to be announced later. It will be presented under the efficient chairmanship of Archie M. Meiklejohn. The show will be held in the Los Angeles swimming stadium building in Exposition park, Los Angeles, where two years ago the first exhibition drew over 6,000 visitors in two days. It is difficult to imagine any gem display ever exceeding in scope either of the last two exhibitions but the plans are ambitious and the members' enthusiasm high so there is little doubt that this year's show will far exceed the others in quality, novelty, number and beauty of the displayed items.

It seems that the authority on Chinese art is a book by that title by Dr. Stephen W. Bushell. It includes an excellent chapter on the methods used in carving jade and it was very kindly brought to my attention by Mrs. Daniel Walters of Ramona, California, who copied the section for me and by Mr. B. A. Matthews of Altadena, California, who offered to do so. This splendid work, in two volumes, is rare and out of print but probably your library has it. It can be obtained in the art department of the Los Angeles library. I will offer a digest of the section soon.

DID YOU KNOW . . .

- The first tourmaline found in California was discovered at Coahuilla, in the San Jacinto mountains of Riverside county, by Henry Hamilton in June, 1872.
- Not only white diamonds but yellow and pink ones have been found in Butte county, California, and a green one in El Dorado county.
- Do you understand the relation of Troy measures to Avoirdupois measures; the relation of the carat to the ounce? To convert grams Troy to Avoirdupois multiply by .03527. A gram is five carats so a hundred carat stone would therefore be $20 \times .03527$ or .7054 of an ounce. An ounce would be 141.75 carats.

Mines and Mining . . .

Carson City, Nevada . . .

An all-Indian highway construction crew building access roads to mines producing highly strategic minerals in Nevada during the past 18 months has set a road-building record for other groups to shoot at. The crew numbers between 35 and 50, and was trained for the work from "the ground up," according to Nevada highway officials.

Winnemucca, Nevada . . .

Harold's Club Mining company expect to place the Valley View tungsten property in operation shortly. Machinery for the mine in the Potosi district already has been purchased and much of it has been set up. Installation work will probably be completed within a short time.

Ely, Nevada . . .

The Getchell Mine and the Nevada-Massachusetts company of Humboldt and Pershing counties have been classed as tungsten producers by the Metals Reserve company. The new classification will enable the operators to receive the bonus price of \$30 per short ton unit of 20 pounds of tungsten trioxide as against the former price of \$24 per unit.

Washington, D. C. . . .

"Of all the metals in the war program, the demand for and the production of magnesium has increased the most," according to a statement made by Philip Danforth Wilson, WPB magnesium production chief. "The 1939 production was 3,350 tons; the war program now provides for nearly 100 times that amount," he pointed out. "Its uses are varied and vital—it is needed for flares, tracer bullets, incendiary bombs, and in airplane construction."

Carson City, Nevada . . .

The Nevada state museum soon will house a standard ingot of magnesium produced at the Basic Magnesium plant near Las Vegas. The metal was presented to Lieutenant-Governor Vail Pittman of Nevada at ceremonies held February 9. The gift was made by F. O. Case, general manager of B.M.I.

Bishop, California . . .

Aaron J. Smith and Frank S. Jackson, both of Long Beach, are completing plans for the erection and operation of a tungsten custom mill four miles north of Bishop. Cost of mill and equipment is set at \$50,000. It will have a daily capacity of 50 tons.

APRIL, 1943

Deming, New Mexico . . .

Explorations for manganese in this state have proved successful enough to warrant establishment of a milling plant at Deming, according to officials of the Albuquerque office of war information. New Mexico was among 13 states in which studies were authorized. As a result projects also have been located in Nevada, Utah, Montana, Arizona, Arkansas, Minnesota and South Carolina.

Moab, Utah . . .

Four new wells in the Crescent-Thompsons area will be sunk for the Potash Company of America to determine the extent of magnesium-potash deposits in that area. Well No. 1 drilled by the Mack company last year for the Utah Magnesium corporation showed extremely rich beds of carnallite and sylvite and revealed an oil saturated sand which may prove productive.

Lovelock, Nevada . . .

Federal authorities have authorized a \$17,000 loan for exploratory drilling in the tin bearing area of the Majuba property near Imlay. Two favorable runs of ore from the Toy plant have encouraged the owners—Greenan-Kerr—to continue development work. The U. S. grazing service has authorized an expenditure of \$20,700 to build a trucking road to the property. Ore put through regular tungsten grinding and tabling process, using trommels, rolls and Wilfey tables made a concentrated running about 67 percent tin and a middling containing about 25 percent tin. These results exceed the usual 60 percent concentrate being shipped from Bolivian mines for treatment in Texas.

Pioche, Nevada . . .

The first shipment of tungsten ore from the Associated Tungsten Mines company property 45 miles north of Pioche has been sent to a Utah refinery. Two carloads will be shipped within a short time. The property was discovered by Owen Walker of Pioche and is under lease to the mining company.

Sacramento, California . . .

California's 1942 mineral production is conservatively estimated at \$379,483,000, according to Walter W. Bradley, state mineralogist. Gold showed a considerable drop from the 1941 total. Metals exclusive of gold and silver, totalled \$11,854,000 for the year, while salines including borates, potash, iodine, salt, soda and others amounted to \$14,150,000.

Washington, D. C. . . .

Loans totaling \$5,199,025 to aid mining developments throughout the country have been authorized by Reconstruction Finance corporation, according to a report made public by Charles B. Henderson, RFC chairman. This total is expected to greatly increase if Nevada's Senator Pat McCarran wins further liberalization of section 14 of the RFC act which requires a preliminary finding that profitable mining operations can be carried on before any loan can be made.

Weather

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for February	59.4
Normal for February	55.1
High on Feb. 20	87.0
Low on Feb. 11	33.0

Rain—	Inches
Total for February	0.07
Normal for February	0.77

Weather—	
Days clear	15
Days partly cloudy	7
Days cloudy	6
Percentage of possible sunshine	76

E. L. FELTON, Meteorologist.

FROM YUMA BUREAU

Temperatures—	Degrees
Mean for February	62.6
Normal for February	58.6
High on Feb. 16	87.0
Low on Feb. 10	40.0

Rain—	Inches
Total for February	Trace
Normal for February	0.41

Weather—	
Days clear	17
Days partly cloudy	9
Days cloudy	2
Sunshine, 88 percent, 272 hours of sunshine out of the possible 308 hours.	

JAMES H. GORDON, Meteorologist.

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DESERT MAGAZINE

636 State Street El Centro, California



Just Between You and Me

By RANDALL HENDERSON

THE BREEZE that blows through my barracks this Sunday afternoon comes from the rolling African bush country. This is a fast-moving war and I have traveled many thousands of miles since I wrote the copy for this page of the March issue of Desert Magazine.

After being on duty in Washington when the thermometer was hovering around zero, it is good to be stationed again in a land where we wear sun helmets, and army regulations permit us to go about our work in shorts and without a necktie. At least it is good for a desert rat from the Southwestern part of the United States. This is my kind of climate, and I am drinking in the African sunshine and enjoying every hour of it.

I have been spending my off-duty hours exploring the strange new land that surrounds our camp. This hardly would be classified as a desert, and yet I have found many plants and a few reptiles which surely are first cousins to some of my botanical and zoological friends on the Great American Desert.

For instance, last evening I saw coming down the trunk of a cocoanut palm a lizard that closely resembled a chuckawalla, except for coloring. It had an orange head and a band of orange around its tail. Later I learned that it is a rainbow lizard.

I have always understood that cacti are native only of the Americas—and that their cousins on this side of the world are called Euphorbias. But not far from camp there are great patches of a prickly pear type of shrub that surely looks like Arizona cactus. Perhaps it was brought from overseas and has invaded this country in the same way that certain species of cacti have spread in parts of Australia. Sooner or later I will find someone who can give me the correct answer.

The landscape here is dotted with ant hills—pinnacles of red sand and clay that sometimes rise to eight or ten feet. These African ants are colossal builders. The odd fact about these hills is that the larger ones appear to have been abandoned. No one here seems to know the reason. Perhaps in the ant world, as in the human world, the concentration of large numbers of creatures in a single community involves problems of transportation and sanitation and food supply that become ever more complicated as the numbers increase.

Eventually the point is reached when the whole structure becomes so intricate and top-heavy it threatens to collapse from its own lost efficiency. Possibly the ants know instinctively when that point is reached, and move on to pioneer a new community. We humans, lacking the sense of moderation possessed by most of the so-called dumb animals, keep on building until our cities become the breeding place for decadence. If you question that conclusion, go read your history books and ponder the fate of Babylon and Rome and Carthage, and study the sociological statistics from New York and London today.

* * *

But let's go back to Africa. After all, the most interesting thing about any region of the earth is the people who live there. In this part of the world a tropical climate and an abundance of food that may be had for picking it off the trees or digging it

from the ground, have produced an easy-going race of people who are content to live in primitive huts and let tomorrow take care of itself. It seems to require hard adverse living conditions to develop creative and aggressive humans.

Except for the military discipline, army life in such an outpost is parallel in most respects to pioneer life in America or elsewhere. And since most of my life has been spent on the desert frontier I am enjoying it to the utmost.

Barefoot natives play an important part in our life here. They build the roads, erect the barracks, serve our food, and do a thousand and one jobs not essentially military in character. Kofi sweeps my room, shines my shoes, does my laundry, and makes sure my cot is properly draped with mosquito bar before I go to bed at night. Joe, the dark-skinned boy who sweeps my office, speaks and writes a little English, and is a genius at repairing my typewriter—although he never saw a typewriter until recently.

* * *

On one of my jaunts through the Bush I came upon a native village. An old woman sat beside the narrow street. In front of her was a big iron bowl containing a charcoal fire. On the grate over the fire she was toasting slices of banana. A half dozen naked children were loitering around, eyeing those banana sweetmeats as an American youngster would gaze at the candy showcase in the five and ten.

For the equivalent of a few pennies I treated the crowd to toasted banana. If you have ever visited a Hopi pueblo in Arizona and passed out lollipops to the Indian kiddies, you can visualize the scene that followed. Bare-skinned children appeared from everywhere. Fortunately the old woman ran out of bananas. That was the only thing that saved me. Eventually the headman of the village appeared, apologized for the rudeness of his children, and furnished an escort to guide me on my way. But he need not have apologized—the kiddies in my home town do the same thing when the Elks or the Legion announce that they will pass out candy at the theater on Christmas morning.

* * *

But all this, of course, is incidental to the purpose for which we are here. With no daily newspapers, and very limited radio contact with the rest of the world, the war—except our own theater—is more remote than to the folks at home who know every day the progress on every front.

Uncle Sam has done a tremendous job over here in preparation for the military objective to be attained. Fortunately, while a majority of the American people preferred to believe that we would never become involved in the war, there were wise heads in Washington making plans and actually laying the groundwork for the conflict they knew was inevitable. Thanks to their foresight, the American expeditionary forces in this theater of war are operating under conditions much more favorable than would have been possible if the army had waited until December 7, 1941, to begin its preparation. Food is good, housing is adequate, and morale is high.



DESERT EASTER TIME

By CECILE J. RANSOME
Riverside, California

Mojave dreams in brown,
Enriched with muted umber,
Throughout the Autumn time;

But she awakes from slumber
When ocotillos crown
The dunes with scarlet rhyme,

And stars come tripping down
A stair of wild cucumber,
At Desert Easter Time.

DESERT LAKE

By ALICE TENNESON HAWKINS
San Pedro, California

As when a peacock preens
The brilliant blues and greens
That shimmer in his sweeping tail,
The sun's caressing touch
Upon this lake is such
That peacock colors seems to pale.

Though sand and sagebrush meet,
Like peacock's ugly feet,
From water's edge devoid of shade,
Nevada mountains rise
Beneath these dazzling skies
Magenta, cobalt, gold, and jade.

The desert lover views
These gorgeous, glistening hues—
This shining peacock's fan and breast—
As rajahs watch the store
Of sparkling gems that pour
Unrivalled from a jewel chest.
(Lake Walker, north of Hawthorne, Nevada)

A DESERT SUNSET

By ALTA L. SKELLY
Silver City, New Mexico

The sun-god grows tired and weary,
The birds chirp a sleepy tune,
A jackrabbit nibbles his evening meal,
And the day says, "Goodnight, moon."
The squaw puts aside her weaving,
And starry eyed children play,
As the sky fades from gold to turquoise,
And the night overtakes the day.

Desert Easter

By MARION MORRIS
Los Angeles, California

A poppy is a poor thing
When ironed between waxed paper.
So, too, a lovely thought
Vanished like a vapor
When I imprisoned words
And pinned them to this paper.

I only know that what I meant:
A year ago a seed fell down
And this is Resurrection!

DESERT WAR MANEUVERS

By EMILY KINGSBERRY
Los Angeles, California

Still in the early morning mist,
Jasper and agate and amethyst,
The craggy hills of the desert rise
Like giant waves toward the morning skies.
And the golden wine of sunlight spills
Over the jagged peaks and fills
The shaded canyon's brimming cup . . .

"You've got to get up, you've got to get up!"

Strange the notes that echo clear
Against the rocks. And men appear
Scurrying about the desert waste,
Breaking the stillness with noise and haste.

No longer does the horned toad
Bask beside the sun-drenched road,
No more the prospector's burro browses
For a scanty meal where the lizard drowses,
Nor the buzzard drift with lazy grace
Through shimmering blue over sandy space.

But great drab birds with mighty roar
Rise from the earth to bank and soar,
Dropping huge eggs in dust and thunder
That tear the desert floor asunder.

Lumbering monsters trample the sage
And cactus, bellowing with rage.

The desert has been invaded by men!

Only the hills remain immutable,
Knowing with wisdom irrefutable
Wars of men will crash and blaze,
But ultimately vanish in desert haze.

CALIFORNIA DESERT

By GRACE NIXON STECHER
Seattle, Washington

Dull copper peaks superbly etched against a
pale blue sky,
A scattered score of Joshua trees with twisted
arms held high,
Sage brush and sand, while sagging wires go
slithering swiftly by.

Tall telegraph poles go marching to the click
of the speeding train,
With never a halt they step and step to the
whirring wheels' refrain
While away and away white ribbony roads lead
over the wind-swept plain.

White ribbony roads that lead to the peaks
pricked out against the sky
With a cactus here and a cactus there to clutch
at the passer-by
And whisper, "I know that my thorns are sharp,
but a beautiful bloom have I."

Oh a fleeting view on a journey through has
made a traitor of me,
Who had given my heart to the forests wild, and
the roaring, billowy sea
But this desert scene slipped in between and
made a traitor of me.

CREED OF THE DESERT

By JUNE LE MERT PAXTON
Yucca Valley, California

When winds sweep wild across the sand,
'Mid groans and moans the desert band
Of Ocotillos writhe, 'tis said.
And as they sway—above their head,
They hold aloft a torch of red.



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